

Tropical Products Institute

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The world market for fresh pineapples



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Foreign and Commonwealth Office (Overseas Development Administration)

This report was produced by the Tropical Products Institute, a British Government organization which helps developing countries to derive greater benefit from their renewable resources.

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NOTES

1. *Divisions of the report*

This report is in two parts, the first deals with world trade in fresh pineapples and the second deals with the market in selected Western European countries in more detail.

2. Metric tons and kilogrammes are the units of weight used throughout this report. Export values are expressed in pounds sterling (£) whereas import values and unit prices for importing countries are shown in their national currencies. However, there is a section using standardised prices, new pence (p) (100p = £1) where inter-country comparisons are made. The reasons for using national currencies were as follows:—
 - i. During the latter half of the period under review, 1967–1970, there were several devaluations and revaluations which made the use of a standardised unit extremely difficult, particularly as regards following trends in individual markets.
 - ii. Exporters no doubt wish to know the price structure and likely returns for their produce in the currencies in which they will be paid; these will in general be the national currencies of the countries concerned.

ACKNOWLEDGEMENTS

The Institute acknowledges with gratitude the assistance given by members of the fruit trade in the preparation of this report.

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SUMMARY AND CONCLUSIONS

1. The pineapple is widely grown in the tropics and sub-tropics. There are four main commercial varieties — the Smooth Cayenne, the Queen, the Red Spanish and the Abacaxis. Smooth Cayenne pineapples are suited both to processing and exporting fresh and are widely grown in most exporting countries. The Queen pineapple is found in the Republic of South Africa, the Red Spanish in the Caribbean area and the Abacaxis in Brazil.
2. World production of pineapples increased throughout the period 1961 to 1969, reaching 3½ million tons in 1969. The major producers are Hawaii, Brazil, Taiwan, West Malaysia, Mexico, the Philippines, Thailand and the Republic of South Africa. However, the majority of pineapples produced go either for domestic use or for processing and in 1969 only 92 000 tons were traded internationally as fresh fruit — see Table 3. In 1970 this trade was likely to have reached 110 000 tons (full details are not yet available) — see page 11.
3. The major exporting countries are Brazil, Mexico, Taiwan, the Republic of South Africa and the Ivory Coast. Exports from these countries are discussed, together with those from the Azores and Cuba; three factors largely determine the destination of exports — distance involved, tariffs and traditional trading ties.
4. Trade in fresh pineapples has fluctuated over the years, there having been a trough in the early 1960's, but in the last five years an upward trend has been sustained. This was largely due to increased exports from Taiwan to Japan and, to a lesser extent, to increased exports from the Ivory Coast.
5. Outside Europe, the main importers of pineapples are the USA, Argentina, Japan and Canada. Of these countries, Japan's market is the only one to have shown considerable expansion during the years 1961–1970, her imports reaching over 35 000 tons in 1970 — see Table 3. Imports into Canada and Argentina have fluctuated over the period but no trend was evident. Although imports into the United States declined, total consumption has been maintained by increased 'domestic' supplies from Hawaii and Puerto Rico.
6. Within Europe, of those countries whose markets are studied in detail, (the EEC countries, the UK, Sweden and Switzerland) all imported much more in 1970 than in 1961, though imports fell in some countries in the mid-1960's. However, a large increase occurred in every country in 1970 and in this year imports totalled over 35 000 tons — see Table 3. France is the leading importer in Europe, and in 1970 accounted for over 40 per cent of the total, followed by the UK and the Federal Republic of Germany with 20 and 17 per cent respectively.
7. In all the European countries studied, imports are concentrated in the months October to April, with peaks in December and at Easter; the relative size and importance of the peaks varies in individual countries.

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7. In all the European countries studied, imports are concentrated in the months October to April, with peaks in December and at Easter; the relative size and importance of the peaks varies in individual countries.

8. All these European countries have a luxury* market for pineapples, the demand being for very fresh, generally large fruit; this fruit is chiefly used by the catering industry. Imports of luxury fruit, which come from the Azores by sea, or by air, principally from Kenya, totalled 1 600 tons in 1969 compared with a peak of 1 900 tons in 1965 and 1 500 tons in 1961 — see Table 4. With the exception of the Federal Republic of Germany and Switzerland, the luxury market is static or declining.

9. Quality, harvesting, packing and transportation are discussed. The pineapple is mainly bought on appearance and in general should be a deep yellow or orange colour; the condition of the crown is an extremely important criterion, particularly with luxury fruit. The time of harvesting is important, as pineapples picked too early will never ripen satisfactorily. Careless handling and packing can lead to losses through bruising. Pineapples for export should be carefully graded as this improves the appearance of the pack and facilitates retail pricing. Most pineapples are packed in fibreboard cartons with internal divisions and should be kept at between 7°C and 10°C. The majority of pineapples are shipped by sea, those which travel by air are usually intended for the luxury market.

10. Barriers to trade in the form of tariffs, quotas, internal taxes and phyto-sanitary regulations are examined — see page 22. There are no quotas for imports of pineapples and the only country having specific phyto-sanitary regulations for pineapples is France. All EEC countries have internal taxes, ranging from 4 to 11 per cent, applicable to fresh fruit; they are not, however, discriminatory against pineapples. Pineapples entering the UK are subject to a 10 per cent *ad valorem* duty with the exception of produce from the Commonwealth and the Republic of South Africa, which is duty free. The EEC has a 9 per cent *ad valorem* duty (associated territories-free), Argentina a 60 per cent *ad valorem* duty [members of the Latin American Free Trade Association (LAFTA) — 1.8 per cent] and Japan a 20 per cent *ad valorem* duty. The USA's and Switzerland's tariffs are based on weight, the latter's approximates to 10 per cent on non-luxury fruit and 5 per cent on luxury fruit at present price levels. There are no tariffs on pineapples entering Canada and Sweden.

11. The seasonal pattern of demand is discussed individually for each country. The peak at Christmas is usually larger than the peak in the spring in France, the Federal Republic of Germany, Italy, Sweden and Switzerland; in the UK, Belgium and the Netherlands, the spring peak is generally the larger. However, this pattern is not invariably followed, e.g. it was reversed in the UK in 1969, when the December peak was largest. It is not possible to comment on recent seasonal patterns in France — the largest single market — owing to absence of relevant statistics. The pattern in the next two biggest importing countries — the UK and the Federal Republic of Germany — is similar in many respects though it is suggested that consumption of pineapples in the latter country is becoming a 'normal' habit whereas in the UK it is still more confined to festive occasions. Demand is minimal during the summer months owing to competition from an abundance of cheap domestic fruits.

12. Distribution is usually through importers/wholesalers (who buy on a commission/consignment basis), to retailers. Most pineapples are sold in fruiterers/greengrocers although the supermarkets are taking an increasing share of the market.

13. Average annual cif prices calculated from the Trade Returns are quoted, together with wholesale price series for the UK and France, and traders' wholesale price quotations for the Federal Republic of Germany and Italy. In general there has been a slow downward trend in average 'all source' import prices for most countries.

* A full definition of the luxury market can be found on page 15.

14. A comparison between cif prices in 1970 for the European countries shows that while there are differences in price levels on the different European markets, if the extra marketing costs involved in supplying the more distant markets e.g. Sweden, where import prices are high, are taken into account, the fob returns in the supplying countries are probably no better. Prices for luxury fruit at import level were about $25 \pm 4\text{p}$ per kg, in 1970, and for non-luxury fruit $14 \pm 3\text{p}$ per kg, excluding very cheap fruit e.g. Cuban — see page 42.

15. Two series of statistical projections — giving in effect lower and upper limits — of demand in 1975 for individual countries in Europe yielded the following results, compared with actual imports in 1970.

	<i>Actual imports in 1970</i>	<i>Projected Demand in 1975</i>	
	Metric Tons	Metric Tons	
		(a)	(b)
France	15 348	24 872	24 460
Fed. Rep. Germany	6 280	5 640	9 596
United Kingdom	7 326	8 501	11 198
Netherlands	828	1 174	1 523
Belgium/Luxembourg	1 862	3 440	4 224
Italy	2 202	4 647	4 071
Sweden	698	1 036	1 430
Switzerland	1 447	2 875	2 922
<i>Total</i>	35 991	52 185	59 424

The first projection uses for its base period data for the years 1961 to 1970 inclusive and the second projection data for the years 1964 to 1970. The methodology used is described and the reasons and justification for making two projections explained. With two exceptions — France and Italy — the second series gave the higher figures and this series predicted a 65 per cent increase in imports in 1975 compared with 1970; the first series gave a 45 per cent increase.

16. It is thought that imports will be nearer to projection (b) than projection (a). The largest absolute increases in the second compared with the first projections are for the UK and the Federal Republic of Germany; underlying changes or developments in the markets in these countries, notably associated with increased retailing of pineapples by supermarkets, are noted and discussed; it is the effects of these developments which suggest that the second prediction is the more realistic.

17. The possible effect of the UK's entry into the EEC is commented upon; it is felt that the most likely result would be some shift from South African to Ivory Coast produce, if the latter's production is adequate.

18. Of those countries outside Europe, it is felt that the USA, Argentinian and Canadian markets will be fairly static in the future and that the market with the greatest potential is the Japanese market.

19. The luxury market is not expected to increase greatly as demand for this type of fruit is largely limited to catering establishments and its price precludes it from wider use.

20. In general, new suppliers will do best to concentrate on the markets nearest them, bearing in mind their own production, freight and packing costs, and the characteristics of the particular market.

SOMMAIRE ET CONCLUSIONS

1. L'ananas est une culture très répandue dans les pays tropicaux et semi-tropicaux. Il en existe quatre variétés commerciales importantes — le Cayenne lisse, la Reine, l'Espagnol Rouge et l'Abacaxis. L'ananas Cayenne lisse convient aussi bien à la mise en boîte qu'à l'exportation en fruit frais, et se cultive en grandes quantités dans la plupart des pays exportateurs. On trouve l'ananas Reine en Afrique du Sud, l'Espagnol Rouge dans les Caraïbes et l'Abacaxis au Brésil.

2. La production mondiale d'ananas s'étant accrue entre 1961 et 1969, atteint pour 1969, le chiffre de 3 millions 1/2 de tonnes; les principaux producteurs en étant Hawaï, le Brésil, Taïwan, la Malaisie de l'Ouest, le Mexique, les Philippines, la Thaïlande et l'Afrique du Sud. Toutefois, la majeure partie de cette production semble se concentrer d'une part, à approvisionner la consommation intérieure de ces pays, ou d'autre part à la mise en boîte: en 1969, seules 92 000 tonnes d'ananas furent exportées fraîches — voir Tableau 3. Il est prévu qu'en 1970, ce commerce aura atteint les 110 000 tonnes (les données précises n'en sont pas encore connues). Voir page 11.

3. Les principaux pays exportateurs d'ananas sont le Brésil, le Mexique, Taïwan, l'Afrique du Sud et la Côte d'Ivoire. Nous examinons dans ce document les exportations provenant de ces pays, ainsi que celles des Azores et de Cuba; leur destination dépendant en grande partie de trois facteurs: distance, tarifs douaniers et liens commerciaux traditionnels.

4. Le commerce de l'ananas frais a beaucoup fluctué, les sécheresses des premières années 60 y ayant beaucoup contribué; mais on a pu observer, durant les cinq dernières années, une nette tendance à la reprise de ce commerce. Reprise due tout particulièrement à une hausse des exportations provenant de Taïwan et destinées au Japon, et dans une moindre mesure, à l'accroissement des exportations de la Côte d'Ivoire.

5. Les principaux pays non-européens importateurs d'ananas sont les Etats-Unis, l'Argentine, le Japon et le Canada. De ces pays, le Japon est le seul marché ayant montré les signes d'une expansion considérable durant les années 1961—1970; en effet, ses importations atteignirent 35 000 tonnes en 1970 — voir Tableau 3. Les importations du Canada et de l'Argentine ont varié durant cette période, mais ne montrèrent aucune tendance définie. En dépit d'une diminution des importations des Etats-Unis, la consommation totale d'ananas s'est vue maintenue par l'accroissement des productions nationales de Hawaï et Porto-Rico.

6. En ce qui concerne l'Europe, l'étude approfondie des marchés de certains pays (tels que Communauté Européenne, Royaume-Uni, Suède et Suisse) a montré que ceux-ci ont importé, en 1970, des quantités bien plus élevées qu'en 1961; bien que, dans certains pays, les importations aient subi un fléchissement marqué durant les années mi-60. Il a été toutefois possible de noter une reprise importante de ces importations dans chacun des pays en 1970, les importations de cette année ayant dépassé le chiffre de 35 000 tonnes — voir Tableau 3. La France est le premier pays importateur d'Europe; ses importations pour 1970 représentèrent plus de 40% du chiffre total; elle est suivie en cela par le Royaume-Uni et l'Allemagne Fédérale, avec respectivement 20 et 17%.

7. L'étude des importations de certains pays européens permet d'observer une concentration marquée de ces dernières entre Octobre et Avril; avec pointes aux alentours de Décembre et de Pâques; l'importance relative de ces pointes variant d'après les pays étudiés.

8. Tous ces pays européens ont un marché de luxe* de l'ananas, la demande se concentrant sur des fruits extrêmement frais et le plus souvent de grande taille; ce

* pour la définition précise d'un marché de luxe, voir page 15.

sont ceux dont se servent les restaurants. Les importations de fruits de luxe, arrivant par bateau depuis les Azores, ou, par avion, la plupart du temps du Kenya, l'élevèrent à 1 600 tonnes pour 1969, comparé à une pointe de 1 900 tonnes en 1965 et 1 500 tonnes en 1961. Voir Tableau 4. A l'exception de l'Allemagne Fédérale et de la Suisse, le marché de luxe est en déclin, sinon statique.

9. Ce document examine aussi les questions de qualité, récoltes, conditionnement, et transport. L'ananas se vend en général par son apparence, et, de préférence, doit présenter une couleur jaune foncé ou orange; de même, la condition de sa couronne est d'une majeure importance, particulièrement pour le fruit de luxe. Le moment de la récolte est aussi un facteur essentiel: l'ananas cueilli trop tôt ne mûrira pas bien. De même, manutention négligente et emballage peu soigné peuvent causer des pertes de fruits écrasés. L'ananas destiné à l'exportation doit être soumis à une classification de qualité minutieuse qui donnera un conditionnement plus attrayant et facilitera l'établissement des prix de détail. La plupart des ananas sont emballés en cartons de fibre de bois avec compartiments intérieurs; ils doivent être gardés à une température entre 7°C et 10°C. La plupart des ananas sont expédiés par bateau; ceux qui sont expédiés par avion sont généralement destinés aux marchés de luxe.

10. Ce document examine en outre le problème des restrictions imposées à ce commerce sous forme de tarifs douaniers, quotas, taxes fiscales et réglementations phytosanitaires — voir page 22. Il n'existe aucun quota pour importations d'ananas; la France est le seul pays imposant des réglementations phytosanitaires spécifiques pour l'ananas. Tous les pays appartenant à la Communauté Européenne ont des taxes fiscales, variant entre 4 et 11%, s'appliquant aux fruits frais; ces taxes toutefois ne sont pas différentielles envers l'ananas. L'ananas importé dans le Royaume-Uni est soumis à des droits de douane *ad valorem* de 10%, sauf pour produits en provenance des pays du Commonwealth ou de l'Afrique du Sud, qui exu, en sont exempts. Les pays du Marché Commun imposent des droits *ad valorem* de 9% (territoires associés: exempts), l'Argentine 60% *ad valorem* [membres de l'association de Libre Echange d'Amérique Latine (LAFTA) 1, 8%] et le Japon 20% *ad valorem*. Les tarifs douaniers des Etats-Unis et de la Suisse sont basés sur le poids du produit, les droits de ce dernier pays s'élevant à 10% environ pour fruits non-luxe, et 5% pour fruits de luxe — aux niveaux des prix actuels. Il n'existe aucune barrière pour l'ananas à l'entrée du Canada et de la Suède.

11. Le présent document examine de même les fluctuations saisonnières de la demande dans chacun des pays étudiés. En France, Allemagne Fédérale, Italie, Suède et Suisse, la pointe des Fêtes de Noël dépasse généralement celle du printemps mais dans le Royaume-Uni, la Belgique et la Hollande, c'est la pointe du printemps qui est généralement la plus élevée. Mais ces variations ne s'appliquent pas toujours identiquement, elles furent inversées dans le Royaume-Uni en 1969, la pointe de Décembre ayant été la plus élevée. Il n'est pas possible de discuter des dernières fluctuations du marché français — le plus important — en raison de l'absence des données requises. Les fluctuations saisonnières des deux pays importateurs les plus importants après la France — la Royaume-Uni et l'Allemagne Fédérale — sont analogues sous bien des aspects, bien que l'on commence à réaliser que la consommation d'ananas dans ce dernier pays est sur le point de devenir une habitude, alors que dans le Royaume-Uni on le réserve encore aux occasions spéciales. La demande fléchit considérablement durant les mois d'été, en raison de l'abondance d'autres fruits offerts au consommateur à des prix plus que raisonnables.

12. La distribution de l'ananas se fait généralement par l'intermédiaire d'importateurs/grossistes (qui font leurs achats sur base de commission/consignation) vendant aux détaillants. L'ananas est vendu la plupart du temps par les marchands de légumes et de fruits, bien que les supermarchés se soient emparés récemment d'une portion accrue de ce marché.

13. Le présent document rapporte les prix moyens CIF annuels calculés d'après les statistiques données; il indique aussi la liste des prix de gros de l'ananas dans le Royaume-Uni et en France, ainsi que le prix offert par les grossistes de l'Allemagne

Fédérale et de l'Italie. On remarque un lent fléchissement généralisé des prix d'importation moyens — quelle qu'en soit la source — pour la plupart des pays étudiés.

14. Lors d'une comparaison des prix CIF de pays européens pour 1970, il est possible d'observer qu'il existe certaines différences de niveaux de prix affectant les différents marchés européens; mais que si l'on tient compte des frais supplémentaires encourus pour l'approvisionnement de marchés distants — tels que la Suède par exemple, où les prix d'importation sont élevés — les rapports FOB des pays fournisseurs ne sont probablement pas beaucoup plus satisfaisants. Le prix du fruit de luxe au niveau de l'importation s'élève à 25 ± 4 p/kg environ pour 1970; celui du fruit non-luxe à 14 ± 3 p/kg, à l'exclusion du fruit très bon marché, par exemple celui de Cuba — voir page 42.

15. Deux séries de projections statistiques — donnant en fait, pour les pays européens, les limites maximales et minimales de la demande pour 1975 — produisirent les résultats suivants, par comparaison avec les importations réelles de 1970.

	<i>Importations réelles pour 1970</i>	<i>Demande prévue pour 1975</i>	
	Tonnes	Tonnes	
		(a)	(b)
France	15 348	24 872	24 460
Allemagne Fédérale	6 280	5 640	9 596
Royaume-Uni	7 326	8 501	11 198
Pays-Bas	828	1 174	1 523
Belgique/Luxembourg	1 862	3 440	4 224
Italie	2 202	4 647	4 071
Suède	698	1 036	1 430
Suisse	1 447	2 875	2 922
<i>Total</i>	35 991	52 185	59 424

La première projection est basée sur les données des années 1961—1970, et la seconde projection sur les données des années 1964—1970. Ce document donne le détail de la méthodologie employée et indique les raisons et justifications pour faire deux projections. Avec deux exceptions — la France et l'Italie — la seconde série donnant les chiffres les plus élevés, et cette série ayant prévu un accroissement des importations de 65% en 1975, comparé au chiffre de 1970; la première série donnait un accroissement de 45%.

16. On pense que le montant des importations se placera plus près des chiffres prévus pour b) que des chiffres a). Les développements les plus marquants de la seconde série, comparés à ceux de la première, sont ceux du Royaume-Uni et de l'Allemagne Fédérale; ce document examine et commente les raisons profondes des changements et développements des marchés de ces pays, dûs notamment à l'accroissement des ventes d'ananas dans les supermarchés; l'effet de ces développements contribue à faire penser que seront réalisées les prédictions des secondes statistiques.

17. Le document examine en outre les effets possibles de l'entrée de la Royaume-Uni dans La Communauté Européenne le résultat le plus probable de cette participation étant un certain déplacement des importations, de l'Afrique du Sud vers la Côte d'Ivoire, si la production de ce pays est suffisante.

18. Pour ce qui est des pays non-européens, il semble que les marchés des Etats-Unis, de l'Argentine et du Canada resteront généralement statiques; mais que celui du Japon montrera les signes du développement le plus important.

19. On ne prévoit pas de grand accroissement du marché des fruits de luxe, car la demande pour ce genre de fruit est largement limitée à l'industrie hôtelière; ses prix, en outre, en empêchent une distribution plus généralisée.

20. Il est conseillé, d'une manière générale, aux nouveaux fournisseurs, de se concentrer sur les marchés situés à proximité de leur pays; ceci en tenant compte de leurs frais de production, transport et conditionnement, et des caractéristiques particulières du marché donné.

RESUMEN Y CONCLUSIONES

1. El cultivo de la piña se lleva a cabo intensamente en las regiones tropicales y subtropicales. Existen cuatro variedades comerciales principales — la Cayena Suave, la Reina, la Española Roja y el Abacaxis. Las piñas de la variedad Cayena Suave son adecuadas tanto para su procesación como para exportarlas frescas y los países exportadores las cultivan en grandes cantidades. La piña de la variedad Reina se encuentra en la República de Sud Africa, la Española Roja en la zona del Caribe y el Abacaxis en el Brasil.
2. La producción mundial de pinas aumentó durante el período 1961 al 1969, llegando a los 3½ millones de toneladas en 1969. Los principales productores son: Hawaii, Brasil, Taiwan, Malasia Occidental, Méjico, las Filipinas, Tailandia y la República de Sud Africa. Sin embargo, la mayoría de las piñas producidas se utilizan ya sea para consumo doméstico como para procesación y en 1969 solamente 92 000 toneladas fueron comercializadas internacionalmente como fruta fresca — ver Cuadro 3. En 1970 esta comercialización pudo haber llegado a las 110 000 toneladas (los detalles finales no se encuentran aún disponibles) ver página 11.
3. Los principales países exportadores son Brasil, Méjico, Taiwan, la República de Sud Africa y la Costa de Marfil. Las exportaciones de estos países se discuten, conjuntamente con aquellas de las Azores y Cuba; tres factores preponderantes determinan el destino de las exportaciones — la distancia a cubrir, las tarifas y las ligazones comerciales tradicionales.
4. El comercio de las piñas frescas ha sufrido fluctuaciones a través de los años, a principios de la década del 60 hubo un mínimo de depresión atmosférica que causó la merma, no obstante, durante los últimos cinco años se ha mantenido una tendencia en ascenso. Esto se debió mayormente al incremento de exportaciones de Taiwan a Japón, y en menor medida a los incrementos de las exportaciones de la Costa de Marfil.
5. Fuera de Europa, los principales importadores de piñas son los Estados Unidos, Argentina, Japón y Canadá. De estos países, el mercado japonés es el único que ha evidenciado una considerable expansión durante los años 1961–1970, sus importaciones alcanzaron a más de 35 000 toneladas en 1970 — ver Cuadro 3. Las importaciones al Canadá y Argentina han fluctuado durante este período pero no se ha evidenciado ninguna tendencia. A pesar de que las importaciones a los Estados Unidos han declinado, el consumo total se ha mantenido dado el incremento de suministros 'domésticos' de Hawaii y Puerto Rico.
6. Dentro de Europa, de aquellos países cuyos mercados se estudian en detalle, (los países del Mercado Común Europeo, el Reino Unido, Suecia y Suiza) todos importaron mucho más en 1970 que en 1961, a pesar de que las importaciones decayeron en algunos países a mediados de la década del 60. Sin embargo, se produjo un gran aumento en todos los países en 1970 y durante el presente año las importaciones alcanzaron un total de 35 000 toneladas — ver Cuadro 3. Francia es la principal importadora de Europa, y en 1970 fue responsable del 40% del total, seguida por el Reino Unido y la República Federal Alemana, con 20% y 17% respectivamente.
7. En todos los países europeos estudiados, las importaciones se concentran en los meses desde octubre a abril, con picos de crecida en Diciembre y durante la Pascua; las dimensiones relativas y la importancia de los picos de crecida varían de país en país.

8. Todos estos países europeos tienen mercados de lujo * para las piñas, siendo la demanda de frutas muy frescas, generalmente grandes, que son mayormente utilizadas por la industria alimenticia mayorista. Las importaciones de fruta de lujo que llegan de las Azores por mar, o por aire, principalmente de Kenia, alcanzaron un total de 1 600 toneladas en 1969 en comparación con el tope de 1 900 toneladas en 1965 y 1 500 toneladas en 1961 — ver Cuadro 4. Con la excepción de la República Federal Alemana y Suiza, el mercado de lujo se encuentra estático o en declive.

9. Se discuten la calidad, la cosecha, el embalaje, y transporte. Principalmente las piñas se compran por su aspecto, que en general debe ser color amarillo intenso o naranja; el estado de la corona es tremendamente importante especialmente en el caso de la fruta de lujo. El tiempo de cosecha es importante pues las piñas recogidas prematuramente nunca maduran de manera satisfactoria. El manipuleo y embalaje realizado al descuido puede conducir a pérdidas, resultantes del machucado. Las piñas para exportación deberían ser calificadas detalladamente ya que esto mejora el aspecto del embalado y facilita la fijación de su precio al por menor. La mayoría de las piñas se embalan en cajas de cartón de fibra con divisiones internas y deberían mantenerse a una temperatura entre 7 y 10°C. La mayoría de las piñas son fletadas por mar, aquéllas que viajan en avión son generalmente las destinadas al mercado de lujo.

10. Las barreras del comercio o sea las tarifas, cuotas, impuestos internos y reglamentos fito-sanitarios se estudian en la p 22. No existen cuotas para la importación de piñas y el único país que tiene reglamentos fito-sanitarios específicos para las piñas es Francia. Todos los países del Mercado Común Europeo tienen impuestos internos, de entre el 4% y el 11%, de aplicación a la fruta fresca; no son, sin embargo, una discriminación contra la piña. Las piñas que entran al Reino Unido son sujetas a un derecho *ad valorem* del 10% con la excepción de los productos de la Comunidad de Naciones (Commonwealth) y de la República de Sud Africa que están libres de impuestos. El Mercado Común Europeo tiene el 9% de recargos por derechos *ad valorem* (los países asociados están exentos). Argentina tiene un impuesto *ad valorem* del 60% [miembros del (ALALC) — Asociación Latino Americana del Libre Comercio — 1.8%] y el Japón un impuesto *ad valorem* del 20%. Las tarifas de los Estados Unidos y Suiza se basan en el peso, en el último caso se aproximan a un 10% para el producto que no es de lujo y un 5% para la fruta de lujo a niveles de precios actuales. No existen tarifas para las piñas que ingresan a Canadá y Suecia.

11. El patrón estacional de demanda se discute individualmente para cada país. La demanda pico en Navidad es generalmente mayor que la demanda pico en la primavera en Francia, la República Federal Alemana, Italia, Suecia y Suiza, en el Reino Unido, Bélgica, y los Países Bajos., la demanda pico de primavera es generalmente la mayor. Sin embargo, este patrón no se repite invariablemente, por ejemplo en el Reino Unido en 1969 se invirtió, siendo la demanda pico de diciembre la mayor de las dos. No es posible comentar el patrón estacional reciente en Francia — el mayor mercado individual — debido a la falta de estadísticas pertinentes. El patrón para los dos países más importantes siguientes — el Reino Unido y la República Federal Alemana — es similar en muchos aspectos a pesar de que se ha sugerido que la consumición de piñas en estos países se está convirtiendo en un hábito mientras que en el Reino Unido continúa siendo generalmente destinada a ocasiones festivas. La demanda es mínima durante los meses del verano debido a la competencia que le hacen las abundantes frutas domésticas económicas.

12. La distribución es generalmente efectuada a través de los importadores/mayoristas (quienes compran sobre la base de comisión/entrega) a los minoristas. La mayoría de las piñas son vendidas por fruteros/verduleros a pesar de que los supermercados están comenzando a consumir una parte creciente del mercado.

*En la página 15, se encuentra una definición completa de los mercados de lujo

13. Los precios promedios anuales por costo, seguro, flete, calculados sobre la base de las Estadísticas Comerciales son citados, conjuntamente con la serie de precios mayoristas del Reino Unido y Francia, y las cotizaciones de precios al por mayor los comerciantes de la República Federal Alemana e Italia. En general ha habido una tendencia gradual decreciente de los precios de importación promedio 'de todas las fuentes' para la mayoría de los países.

14. La comparación entre los precios por costo, seguro y flete de 1970 para los países europeos demuestra que si bien existe una diferencia en el nivel de precio de los diferentes mercados europeos, si se toman en cuenta los costos de mercado adicionales resultantes de la provisión a los mercados más distantes, por ejemplo Suecia, donde los precios de importación son altos, las estadísticas para 'libre a bordo' en los países proveedores probablemente no sean mejores. Los precios para la fruta de lujo a nivel de importación eran de alrededor de $25 \pm 4p$ por kg en 1970, para la fruta no calificada como de lujo $14 \pm 3p$ por kg, exceptuando la fruta muy económica como por ejemplo la cubana - ver p 42.

15. Dos series de proyecciones estadísticas — conteniendo efectivamente los límites inferior y superior — de las demandas en 1975 para países individuales de Europa proporcionarían los siguientes resultados que se comparan con las importaciones presentes en 1970.

	<i>Importaciones Actuales en 1970</i>	<i>Demanda Proyectada en 1975</i>	
	Toneladas métricas	Toneladas métricas (a)	Toneladas métricas (b)
Francia	15 348	24 872	24 460
Rep. Fed. Alemana	6 280	5 640	9 596
Reino Unido	7 326	8 501	11 198
Países Bajos	828	1 174	1 523
Bélgica/Luxemburgo	1 862	3 440	4 224
Italia	2 202	4 647	4 071
Suecia	698	1 036	1 430
Suiza	1 447	2 875	2 922
<i>Total</i>	35 991	52 185	59 424

La primera proyección utiliza como información básica de período la de los años 1961 a 1970 inclusive, y la segunda proyección utiliza la información de los años 1964–1970. La metodología utilizada se describe así como también las razones y justificación por efectuar dos proyecciones. Con dos excepciones — Francia e Italia — la segunda serie suministró las cifras más altas — y esta serie pronosticó un incremento del 65% en las importaciones de 1975 comparadas con aquellas de 1970; la primera serie otorgó un 45% de aumento.

16. Se piensa que las importaciones estarán más cerca de la proyección B que de la proyección A. Los más amplios incrementos totales de la segunda comparados con las primeras proyecciones son para el Reino Unido y la República Federal Alemana; los cambios o desarrollos en los mercados de estos países, especialmente en asociación con el incremento de demanda de piñas por los supermercados se notan y se discuten. Son los efectos de estos desarrollos los que sugieren que el segundo pronóstico es el más realista.

17. Se comenta el posible efecto de la entrada del Reino Unido en el Mercado Común Europeo; se cree que el resultado más probable sería un cambio del producto sudafricano por el de la Costa de Marfil, si este último resulta adecuado.

18. Tratándose de los países fuera de Europa se cree que los mercados estado-unidenses, argentino y canadiense permanecerán medianamente estáticos en el futuro y que el mercado con el mayor potencial es el japonés.

19. No se espera un gran aumento en el mercado de lujo puesto que la demanda de este tipo de fruto se limita mayormente a los establecimientos de provisión alimenticia y su precio lo excluye de la posibilidad de utilización a mayor escala.

20. Generalmente, los nuevos proveedores harán todo lo posible para concentrarse en los mercados que les estén más cercanos teniendo en cuenta su propia producción, flete y costos de embalaje y las características del mercado en particular.

The world market for fresh pineapples

INTRODUCTION

Varieties and characteristics of the pineapple

The pineapple *Ananas comosus* (L.) Merr., is native to the tropics, and is cultivated mainly, but not exclusively, in the area between 25°N and 25°S. There are about forty different varieties of pineapples but only a few are grown to any extent at present. The four main commercial varieties are the Smooth Cayenne, the Queen, the Red Spanish and the Abacaxis.

Smooth Cayenne pineapples are favoured for canning and are also very acceptable on the fresh fruit market; this variety or local sub-varieties are grown in most major exporting countries. Fruit from the Azores is generally referred to as the St Michael pineapple, although it is probably a local strain of the Smooth Cayenne, as is the Cayenne Lisse grown in the Ivory Coast and Martinique. These sub-varieties tend to be rather squat fruit, with smaller crowns than the Smooth Cayenne pineapples grown in the Republic of South Africa and Kenya. When fully ripe the St Michael pineapple is a bright yellow-orange colour with deep yellow flesh, which is reasonably sweet. Another advantage of the St Michael pineapple is that the core is small and therefore there is less wastage when the fruit is cut into portions.

The Queen is a small fruit of about 0.7 kg (1½ lb) weight with a good sweet flavour, fine textured flesh and a small core. The small size of the Queen enables it to be retailed at very reasonable prices per piece and it is therefore favoured by certain sections of the retail trade. Some Queen pineapples are still exported from the Republic of South Africa.

Red Spanish pineapples are chiefly grown in the Caribbean and Mexico, but the colour, a dull yellowish red, is not very attractive and the texture of the fruit tends to be woody; its flavour is generally considered to be inferior to that of the Smooth Cayenne.

The principal variety of pineapple exported from Brazil is the Abacaxis or Pernambuco. This pineapple approaches an elongated cylinder in shape, the flesh is pale yellow to white, juicy and tender, and although it is generally less acid than the Smooth Cayenne, the flavour is good. The fruit has a small core, and in this respect resembles the South African Queen variety.

Part I

WORLD PRODUCTION

Table 1 gives particulars of the production of pineapples in the principal producing countries since 1961 as reported in the FAO Statistical Yearbooks. According to this table, world production exceeded 3 500 000 tons by 1969, compared with just over 3 100 000 tons in 1961 and apart from 1965 and 1968, it continued to rise throughout this period.

The major pineapple producing countries in order of importance in 1969 were Hawaii, Brazil, West Malaysia, Taiwan, Mexico, the Philippines, Thailand, the Republic of South Africa, the Ryukyu Islands, Pakistan and Australia – all producing over 100 000 tons in that year. In addition the Ivory Coast, Ecuador, Puerto Rico, Venezuela, Ceylon, Cambodia, the Vietnam Republic, Tanzania, Kenya, Guinea, Ghana, Paraguay, Cuba and Martinique produced between 20 000 and 99 000 tons in 1969.

However, not all these countries are producing fresh pineapples for export. Hawaii, for instance, is primarily concerned with producing pineapples for processing and is very insignificant when world trade in fresh pineapples is considered, although she does send considerable quantities of fresh fruit to the USA mainland¹. The main exporting countries of fresh pineapples are Mexico, Brazil, Taiwan, the Republic of South Africa, the Ivory Coast, the Azores, Martinique, Guinea and Cuba, together with West Malaysia; however the last named is a special case which is discussed in more detail in the next section. In general the amount of fresh pineapples exported by the countries shown in Table 2 (excluding West Malaysia) is about 2 per cent of total world production as can be gauged by comparing Tables 1 and 2. The remainder of the pineapples produced are either used in processing or for domestic consumption.

Production in Brazil has risen over the years from about 274 000 tons in 1961 to 389 000 in 1969, and in West Malaysia it increased rapidly up to 1964 but since then has levelled off. Taiwan also increased its production from 174 000 tons in 1961 to 325 000 by 1969 while Mexico increased its production of pineapples by 100 000 tons to 275 000 in 1969 and the Philippines increased production by over 100 000 tons between 1961 and 1969. The only two major pineapple producing countries whose production has declined are Hawaii and Thailand. Most of the increase in production has been absorbed first by processors and then by domestic fresh fruit markets.

In 1969, Hawaiian production accounted for 22 per cent of the world total, Brazil's accounted for 11 per cent, West Malaysia's and Taiwan's for 9 per cent each, Mexico's for 7 per cent, the Philippines's for 6 per cent and Thailand's for 5 per cent.

Table 1
Estimated world production of pineapples 1961-1969
'000 Metric Tons

	1961	1962	1963	1964	1965	1966	1967	1968	1969
Europe—					3	3	4	4	4F
Azores	...	...	...	...					
N & C America—					26F	20F	17F	20F	20F
Cuba	87*	100*	100*	100F	5	6	6	7	7F
Dominican Republic	5	5	5F	5F	—	—	—	1	1F
Guadeloupe	1	—	—	—	—	—	—	—	—
Honduras	2	2	3	3	3*	3F	3F	3F	3F
Jamaica	1	1F	1F	1F	1F	1F	1F	1F	1F
Martinique	12	14	18	21	20	17	20	21	20F
Mexico	177	178	193	201	235	231	251	242	275
Hawaii	955*	935*	935*	935F	852	855	884	834	783
Puerto Rico	50	52	59	60	73	65	65	59	49
S America—					2	2F	2F	1	1
Argentina	2F	2F	2F	2F	7*	7*	7*	7*	7F
Bolivia	1*	5*	3F	2*	—	—	—	—	—
Brazil	274	276	274	291	292	295	337	338	389
Ecuador	58	55	56	56	60	60	56	52	50F
Guyana	1F	1F	2	2	1	2	2	1	1
Paraguay	10*	10*	10F	10F	18F	31*	32*	31*	34*
Venezuela	22	32	31	30	36	37	38	39	41
Asia—					14	15	20	22	41
Cambodia	20F	22F	23	24	40	32	45	37	40F
Ceylon	20	26	23	27	231	270	296	311	325
Taiwan	174	192	163	227	315	317	344	324	329
W Malaysia	167*	203*	193*	314	45	57	92	97	105
Pakistan	...	...	...	...	176	188	208	226	238
Philippines	116	140	151	155	68	88	87	75	101
Ryukyu Islands	34	33	43	49	301	295	188	200F	200F
Thailand	450	321	303	260F	48	39	37	34	33
Vietnam	41	59	62	57					
Africa—					3	3	4	3	4
Cameroon	2	2	3*	3F	3F	3F	3F	3F	3F
Dahomey	2	2F	3F	3	21	22	21	28	28F
Ghana	180F	200F	232	232	15F	15F	15F	15F	15F
Guinea	11*	12*	11*	13*	44	61	84	89	90
Ivory Coast	23	33	44	44F	26F	30F	35F	35F	29
Kenya	17F	23F	25F	25F	7F	8	9	9F	9F
Madagascar	7	7	...	...	...	...	...	1	1
Mauritius	—	—	—	...	1F	1F	1F	1F	1F
Mozambique	...	...	...	...	1	1	1F	1	1F
Reunion	1	1	1	1					
Republic of South Africa	103	111	111F	111F	135F	140F	143*	132*	123*
Swaziland	3	3	3	4	6	8	13	10	11
Tanzania	...	...	...	...	30	30	30F	30F	30F
Oceania—									
Australia	75	79	85	69	96	118	133	121	103
WORLD TOTAL	3 104	3 156	3 171	3 337	3 260	3 375	3 534	3 465	3 539

F = FAO estimate

* Unofficial figure

— None

... Data not available

Source:— FAO Production Yearbooks

WORLD EXPORTS

Fresh pineapples are of minor importance in world trade when compared with such fruits as apples, oranges, lemons and bananas, but compared to other tropical fruits are second only to bananas in world trade.

The major supplying countries have been identified above but unfortunately, because of the scarcity of figures, it is difficult to obtain a complete picture of world trade in fresh pineapples from export figures. As can be seen from Table 2, figures are not available for some of the other known suppliers and this leads to a distortion of the pattern and an underestimation of total exports. However, it is possible to obtain some idea of the exports of the suppliers whose trade represents the gap between the totals in Tables 2 and 3 by studying importing countries Trade Returns

Table 2
Exports of fresh pineapples from selected countries 1961–1970
Metric Tons

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Brazil	24 006	17 137	10 158	14 524	21 736	21 593	18 987	22 138	21 781	...
Mexico	19 650	25 327	31 729	20 561	19 476	14 878	10 520	8 706	11 671	...
Ivory Coast	2 100	2 380	2 880	4 210	4 591	6 839	9 987	13 736	8 582	11 472
Republic of South Africa	2 844	2 776	2 201	2 021	1 659	1 599	3 396	4 989	4 464	6 475
Azores	1 380	1 383	1 445	1 378	1 485	1 239	1 376	1 241	1 023	953
Cuba ¹	14 789	4 126	1 464	4 728	688	172	10	58	1 133	2 184
Taiwan ²	—	14	26	91	4 848	16 856	18 461	19 277	20 115	32 541
West Malaysia	254	300	443	206	53 159	44 179	41 745	28 422	31 629	...
TOTAL (excluding West Malaysia)	64 769	53 143	49 903	47 513	54 483	63 176	62 737	70 145	68 769	...

— Nil or negligible

... Not available

¹ 1966 onwards imports into Canada and West European countries

² Imports into Japan

Source:—*Derived from. Officially Published Trade Returns*

though, as is always the case, a precise fit cannot be obtained. During the years 1967 to 1969 the difference between the two tables averaged 15 000 tons, of this approximately 12 000 tons can be accounted for by named significant suppliers — these were, with average supplies in brackets: Martinique (5 000 tons), USA (1 500 tons), Philippines (1 300 tons), Puerto Rico (1 200 tons), Guinea and the Cameroons (1 000 tons) and Kenya and the Ryukyu Islands (500 tons). Martinique's supplies were tending upwards and the USA's downwards.

As regards West Malaysia, Table 2 shows a dramatic increase in exports in 1965 and thereafter compared with earlier years. Cannery in Singapore have always drawn the bulk of their fruit supplies from the mainland and this apparent change in trading patterns, as depicted by the statistics, resulted from the breakup of the Federation and subsequent publication of separate trade statistics by the two new countries — West Malaysia and Singapore; what was previously a domestic movement of fruit is now international trade. For the purposes of studying world trade in fresh pineapples West Malaysia's exports to Singapore are ignored.

It can be seen from Table 2 that total exports of fresh pineapples, excluding West Malaysia's trade, declined from over 64 000 tons in 1961 to under 50 000 tons in the mid 1960's before rising again to over 68 000 tons in 1968 and 1969. The decline in the early sixties was due largely to a reduction in Cuba's exports (to the USA) and the subsequent recovery to increased exports from the Ivory Coast and the Republic of South Africa to Europe and from Taiwan to Japan. Besides the countries just mentioned, Brazil and Mexico were the other principal exporters of fresh pineapples.

Trade in fresh pineapples tends to follow a distinct pattern; exporters in general supply those countries either which are nearest, as in the case of Mexico, Brazil and Taiwan, supplying the USA, Argentina and Japan respectively, or countries with whom they have traditional ties and/or tariff advantages, as in the case of the Ivory Coast and the Republic of South Africa who trade principally with EEC countries and the UK respectively.

The following sections summarise briefly the position in certain selected exporting countries during the period 1961 to 1970.

Brazil

Brazil (see Appendix B, Tables 1a and 1b) is one of the principal exporters of fresh pineapples in the world, and the vast majority of her exports are of the Abacaxis variety. Very small quantities of other varieties of pineapples were exported from Brazil during this period, but were not shown separately in the Trade Returns after 1966. Over the nine years 1961 to 1969, Brazilian exports of fresh pineapples have fluctuated considerably. Exports were highest in 1961 at 24 006 tons and lowest in 1963 at 10 158 tons and although the amount exported increased from 1964 onwards, it was still slightly less in 1969 than in 1961.

Argentina is Brazil's main market; between 1966 and 1969 she took over 95 per cent of Brazil's exports, and before that over 80 per cent. Exports to Argentina have been fairly consistent from 1965 onwards, averaging 20 443 tons per annum, but fluctuated violently between 1961 and 1964. Between 1961 and 1964, over 10 per cent of Brazil's annual exports went to the Federal Republic of Germany but subsequently this market has declined, in 1969 only 50 tons went there — about 0.25 per cent of Brazil's exports. Brazil has supplied various other markets during this period e.g. the Netherlands with 50 tons in 1969, but their share of Brazil's exports is insignificant compared with Argentina's.

Brazilian pineapples are only subject to a tariff of 1.8 per cent on entering Argentina as both countries are members of the Latin American Free Trade Association (LAFTA) — this compares with a 60 per cent *ad valorem* tariff for non-members.

There are two possible reasons for the decline in imports into the Federal Republic of Germany; first other types of pineapple may be preferred but secondly and more important, the progressive introduction of the common external tariff by the EEC has given associated countries, notably the Ivory Coast, a marked advantage which Brazil does not enjoy. This tariff stands at 9 per cent *ad valorem* at present. These factors would also affect the trading patterns of other EEC countries.

Mexico

Mexico (see Appendix B, Table 2) is another important exporter of fresh pineapples, and supplies mainly the American market. Exports reached a peak in 1963 of 31 759 tons but then declined until 1968 when they reached a low of 8 706 tons. Although exports rose slightly in 1969 to 11 671 this figure was still only just over a third of the 1963 figure and under half the average for the years 1961 to 1965. The change in the trade pattern is attributed to greater reliance by the United States on domestic supplies — from Puerto Rico and Hawaii.

In every year from 1961 to 1969, at least 98 per cent of Mexico's exports of fresh pineapples went to the USA. The USA is the nearest market for Mexico, although Mexican pineapples are not exempt from the American import duties which vary according to the method of packing.

The average value of exports rose from £85 in 1961 to £127 per ton in 1964. The price remained steady at just below this level for the next two years, and then fell to an average of £105 per ton between 1967 and 1969. It is interesting to note that when exports were lowest, i.e. in 1968, there was no notable price rise, nor was there a fall in price in 1963 when exports of pineapples were at their height.

The Ivory Coast

Recently the Ivory Coast (see Appendix B, Table 3) has become a relatively large exporter of fresh pineapples, supplying mainly European countries. In 1961 the Ivory Coast only exported 2 100 tons and it was not until 1964 that this figure rose substantially. Exports of fresh pineapples rose sharply from 4 210 tons in 1964 to 13 736 tons in 1968, an increase of 326 per cent.

The Ivory Coast exports mainly to France; in 1961 and 1962 this trade accounted for over 95 per cent of total exports and for 87 per cent over the remaining years — 1963 to 1968 — taken together.

The only other market which the Ivory Coast supplied throughout this period was Italy who took very limited quantities in 1961 and 1962, 14 per cent in 1963 and between 4 and 8 per cent per annum from 1964 onwards. The Ivory Coast increased in aggregate her exports to Italy, although her share of the market remained fairly stable.

In 1965, a year when exports to Italy were low in quantity and share, Algeria took 9 per cent of Ivory Coast exports (this was not repeated) and since 1966 Senegal has been importing small, but increasing quantities of Ivory Coast pineapples; the Ivory Coast also exports small amounts direct to other European countries.

As seen above, France is the main market for the Ivory Coast. This is attributed to the proximity of the two countries, the preferential tariff (free compared with 9 per cent *ad valorem* for third countries) which the Ivory Coast enjoys and particularly to traditional ties and the part which France has played in helping to develop the Ivory Coast's industry. Help has been provided by the French Institute, Institut Français de Recherches Fruitières d'Outre-Mer (IFAC) on agronomic and other technical matters (e.g. packing) and capital for plantation

development has been provided by France. It should be noted, however, that a sizeable proportion of fruit imported initially into France is on-shipped to other EEC countries.

Average export prices rose a little from £62 per ton in 1961 to £68 per ton in 1964, levelled off in 1965 to £64 per ton and stayed at this level until 1968 when they rose to £75 per ton. The average price of exports to France was either equal to or just below the average price for exports to all destinations.

Cuba

Official statistics are only available for Cuban exports of fresh pineapples up to 1965 (see Appendix B, Table 4). Exports fell drastically after 1961, and although they rose in 1964, in 1965 only 688 tons were exported. In 1961, 76 per cent of Cuba's exports went to the USA, but with the cessation of trade between these two countries Cuba lost her main market. It also seems likely that as a result of the revolution, the Cuban pineapple industry may have suffered considerable disruption. Canada, the German Democratic Republic and Czechoslovakia were among the other countries taking Cuban fruit in 1961. From 1962 to 1964, Cuba exported mainly to the Federal Republic of Germany, Poland, Czechoslovakia, and with the exception of 1963 — Canada. In 1965, all Cuban exports of fresh pineapples went to Bermuda.

By using importing countries' figures, estimates can be made of the amount of pineapples exported by Cuba since 1965 but as these figures refer only to Western Europe and Canada, it is more than likely that they err on the low side. In 1966 and 1967, only Canada showed imports from Cuba and they represented very small amounts. By 1970 Cuban exports had risen to almost 2 200 tons, but this figure is still far short both of the 1961 figure (14 800 tons) and the peak export figure of 1956 — 39 000 tons. Besides Canada, the Federal Republic of Germany and the Netherlands are now the two leading known importers of Cuban pineapples. Cuban exports to the EEC are subject to the external tariff of 9 per cent, but entry into Canada for fresh pineapples is duty free.

The Republic of South Africa

Exports of fresh pineapples from the Republic of South Africa (see Appendix B, Table 5) declined steadily from 2 844 tons in 1961 to 1 599 tons in 1966, but from 1967 onwards rose, except for a slight set-back in 1969; by 1970 exports had reached 6 475 tons. Throughout the ten years, the United Kingdom was the major market for South African pineapples. Between 1961 and 1963, 88 per cent went to the UK and in 1966 the figure rose to 98 per cent and has remained at this level since; there is no duty on imports of fresh pineapples from the Republic of South Africa into the UK. At the beginning of the period small quantities were also exported to other European countries — Belgium, the Federal Republic of Germany, Netherlands and Sweden — but this trade apparently ceased after 1962.

The average export price rose steadily from £48 per ton in 1961 to £72 per ton in 1966, fell in 1967 to £66 per ton, and then from 1968 to 1970 stayed at around £70 per ton. In the earlier years at least, it would appear that as exports from the Republic of South Africa declined, the price per ton rose. The higher prices paid to canners in the first half of the period may have resulted in the reduction of exports, but in more recent years the South African export trade has become better organised. It is not controlled by a marketing board as is the case for most temperate type and citrus fruits; there are about five exporters of pineapples in the Republic of South Africa, one of which has a 60 per cent share of exports and sells to one importer in the UK.

Azores

The Azores' pineapple is grown under glass, there is no processing industry and the fruit is destined solely for the fresh fruit market, either in Portugal or by export for the luxury market* in other European countries.

Until 1967 exports from the Azores (see Appendix B, Table 6) remained fairly steady around 1 300 tons, with a peak of 1 485 tons in 1965, but after 1967 began to decline and in 1970 reached only 952 tons. Whether the decline was due to lower production, increased shipments to the Portuguese mainland or increased competition from other countries e.g. Kenya, is not altogether clear, though some importers in the UK who specialise in luxury fruit say that the Azores' fruit compares unfavourably with the Kenyan in reliability and quality.

There is no one market to which the Azores supplies the majority of its pineapples; the three largest markets during this period were the Federal Republic of Germany, France and the UK who together accounted for over 60 per cent of Azores exports over the period reviewed. The Federal Republic of Germany has remained the largest single market for Azores pineapples although exports to this country fell from a peak of 495 tons in 1962 to 272 tons in 1970. Exports to the UK have also fallen (140 tons in 1970) but exports to France had been steady (over 200 tons each year). Throughout the ten year period the Azores also supplied Belgium/Luxembourg (hereafter called Belgium), Italy, Spain, Switzerland and Sweden, besides supplying other countries in some years. Imports of fresh pineapples from the Azores into EEC countries are subject to the 9 per cent *ad valorem* tariff and into the UK to the 10 per cent *ad valorem* tariff.

The average export price rose from £99 per ton in 1961 to £118 in 1963, fell in 1964 to the 1961 level and then rose to reach £130 per ton in 1970.

Other countries

Two other countries, Taiwan and Martinique are also important exporters of fresh pineapples although less is known about this trade. In 1968, 1969 and 1970 Martinique's exports of pineapples stood at over 5 000 tons; she supplies mainly France but also Sweden and the Federal Republic of Germany. As an overseas Department of France, Martinique, of course, faces no tariffs in the EEC and like the Ivory Coast has received considerable help from IFAC.

According to Japan's trade figures, (Appendix B, Table 9) Taiwan's supplies to Japan rose from nil in 1961 to 4 848 tons in 1965, jumped to 16 856 tons in 1966, rose steadily to 20 115 tons in 1969 and jumped again to 32 541 tons in 1970. The 1969 figure placed Taiwan marginally second to Brazil, hitherto the world's leading exporter but in 1970 (assuming that Brazil's exports maintained the steady level of the previous four years) she exported about half as much again as any other supplier.

*For a definition of the luxury market see p 15.

IMPORT TRADE

General

Table 3 shows, where indicated, net import figures, otherwise gross data. It is believed that those countries with a significant level of exports or re-exports show this trade in their returns, at least in the later years. From this table it can be

Table 3
Imports of fresh pineapples 1961-1970
Metric Tons

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
France	4 088*	4 801*	5 437*	6 930*	7 421*	8 699*	12 175*	13 046*	13 304*	15 348*
United Kingdom	3 215	2 909	2 958	2 960	2 694	2 749	4 438	5 617	5 045	7 326
Federal Republic of Germany	3 552	3 440	2 199	1 995	2 162	2 068	2 985	4 186*	3 674*	6 280*
Italy	97	192	295	520	597	966	1 337	1 561	1 613	2 202
Switzerland	(124)	(148)	(200)	(270)	(411)	(461)	(600)	1 253	1 010	1 447
Belgium/Luxembourg	191	135	101	156	245	393	574	961	1 198	1 862
Netherlands	115	124	44	102	160	117	288	376*	358*	828*
Sweden	74	74	64	70	83	105	188	245	359	698
USA	24 390	24 123	24 959	19 141	19 116(M)	14 868(M)	10 490(M)	8 654(M)	11 636(M)	...
Argentina	21 221	14 301	11 742	18 197	24 842	23 578	15 970	22 640	26 871	...
Japan	686	924	2 495	5 521	11 172	21 191	21 004	21 382	23 648	35 609
Canada	3 871	3 221	1 814	2 543	2 822	2 538	2 519	2 254	2 991	3 292
TOTAL	61 624	54 392	52 308	58 405	71 725	77 733	72 568	82 175	91 707	74 892

... not available
Source:— Derived from Official Trade Statistics
(M) Mexican exports
* net imports
() TPI estimate

seen that imports into the countries shown fell during the years 1961 to 1963 from 62 000 to 52 000 tons and then rose to nearly 92 000 tons in 1969. Figures for Argentina and the USA are not yet available for 1970, but the final total is likely to be considerably higher than the 1969 figure — as much as 110 000 tons. Until 1965 the USA was the largest importer of fresh pineapples, followed by Argentina and France. After this date, the USA did not show fresh pineapples as a separate category and so estimates have been made using Mexico's export figures. Argentina took over from the USA as principal importer in 1965 and she has remained either first or second in importance every year since. Japan has been gradually overhauling Argentina in importance in recent years, actually topping her in 1967 and it will be extremely surprising if Japan's imports of 36 000 tons in 1970 are not well ahead of Argentina's. In recent years France has been the third most important importer and the USA the fourth.

In this report the United States, Argentina, Japan and Canada will be treated separately from European countries because (a) no field work has been done in these countries (b) with their geographical situation their sources of supply are quite distinct and (c) there is little evidence from the statistics that a luxury market exists in these countries (with the possible exception of Japan). Consideration of these markets follows.

The United States

Imports of fresh pineapples into the USA (Appendix B, Table 7) are not quoted separately in the trade returns after 1964. Until this date, the USA had been the leading importer of fresh pineapples amongst the countries studied. For the first three years, 1961 to 1963, imports of fresh pineapples remained fairly steady, averaging 24 490 tons but in 1964 imports fell by approximately 6 000 tons to just over 19 000 tons. This fall in imports was largely the result of a reduction in the amount supplied by Mexico. In 1961 Mexico supplied 73 per cent of the US market and Cuba 22 per cent but after the cessation of the latter trade, Mexico's share of the market increased to over 90 per cent.

Other minor suppliers include South and Central American and Caribbean countries.

The average import price for pineapples rose from 24 cents per kg in 1961 to 40 cents per kg in 1964, largely as a result of an increase in prices for Mexican pineapples.

Argentina

Argentina was the second largest importer of fresh pineapples until 1965 when she became the largest. Total imports into Argentina (see Appendix B, Table 8) fluctuated over the period 1961 to 1969, falling from 21 221 tons in 1961 to 11 742 tons in 1963, rising to 24 842 tons in 1965, falling again in 1967 to 15 970 tons and finally rising to 26 871 tons in 1969. This 1969 figure was only 5 500 tons higher than in 1961. It has previously been reported that the violent fluctuations in imports are attributable to prevailing financial conditions, notably changes in currency parities².

Throughout this period, the main supplier of fresh pineapples to Argentina was Brazil, who supplied over 90 per cent of the market in all but two years and in these two years she supplied over 80 per cent. The only other supplier of note is Paraguay who supplied Argentina throughout this period, although with fluctuating amounts.

Japan

It can be seen from Table 3 that in 1970 Japan was the largest importer of fresh pineapples among the countries studied and also the country to have shown the greatest increase in imports of pineapples during the years 1961 to 1970.

From 1961 (see Appendix B, Table 9), when her imports were only 686 tons, to 1970, when imports reached 35 609 tons, there was a tremendous growth in the Japanese market, reflecting the overall expansion of the economy. Between 1962 and 1966, imports of fresh pineapples doubled each year until they reached 21 191 tons in 1966. For the next three years imports stayed at much the same level but in 1970 rose by over 50 per cent to 35 609 tons, a figure fifty times larger than that in 1961. There was no obvious reason e.g. change in tariff — to explain the increased imports in 1970, and it will be interesting when later years' trade statistics become available to see whether the 1970 figure was high and out-of-line or the beginning of a new surge. (Preliminary data for 1971 show imports to be well up on the corresponding period in 1970).

Until the emergence of Taiwan in 1965 as the major supplier to this market various countries had supplied Japan with fresh pineapples. In 1961 and 1962, the USA (probably Hawaii) supplied over 45 per cent of the market and Malaysia averaged about 30 per cent. In 1963 and 1964 the Ryukyu Islands and the USA together supplied over 80 per cent of the total.

However, in 1966 Taiwan supplied 79 per cent of the total and from 1967 onwards her share of the market averaged around 88 per cent. The USA and the Ryukyu Islands continued to supply the Japanese market throughout the period although with dwindling supplies. The Philippines started to supply Japan with fresh pineapples in 1963 and by 1970 was providing 7 per cent of the total. West Malaysia stopped supplying the Japanese market in 1964 and Thailand and Singapore only supplied this market in the mid-sixties.

All source average annual import prices of pineapples have ranged between 553 yen and 599 yen per kg since 1966, but have shown a tendency to decline slightly. Import prices for Taiwan pineapples tend to be about 3 to 4 per cent below the all source average and those for the USA about 40 per cent above. This latter figure no doubt reflects high marketing costs, even perhaps the use of air transport; the fact that small quantities of this expensive fruit is still imported suggests there may be a small market for luxury fruit in Japan.

Canada

Over the ten year period 1961-1970 imports of fresh pineapples into Canada (see Appendix B, Table 10) have fluctuated between a peak of 3 871 tons (in 1961) and a low of 1 814 tons (in 1963). There has been no pronounced trend although imports seem to have recovered towards the end of the decade, having fallen away in the mid 1960s, nevertheless imports of 3 292 tons in 1970 were still only 85 per cent of the quantity imported in 1961.

The reduction in imports in 1963 was largely due to a sudden drop in supplies from Cuba and failure immediately to make good this reduction from other sources. Cuba supplied 2 849 tons (70 per cent of the total) and 2 033 tons (60 per cent) in 1961 and 1962, but only 600, 702 and 717 tons in the next three years. Further declines followed in the years 1966 to 1968; in the last two years Cuban supplies were under 50 tons. However, there has been an improvement in Cuban supplies since, reaching 334 tons in 1970.

In 1964 and 1965 the USA was the main supplier to Canada, but in 1966 was replaced by Puerto Rico. Together they supplied well over 60 per cent of the Canadian market during the years 1964 to 1970. Since 1965 supplies from the USA have tended to fluctuate more than those from Puerto Rico (the leading

supplier) which remained around the 1 200 ton mark. Canada and other countries show supplies from the USA and Puerto Rico separately rather than together as one might expect; no attempt is made here, or for other countries doing likewise, to reclassify USA/Puerto Rico supplies as one source, indeed specific comments may be made in this text regarding trends and prices one against the other.

Mexico also supplied this market throughout this period and in 1968 the Honduras Republic started to export to Canada, providing 9 per cent of total supplies in 1970.

During the last five years, average all source import prices rose from \$1.47 in 1966 to \$1.64 in 1970 but the price has been fairly constant around \$1.60 for the past four years. Import prices for pineapples from the USA were highest while those for Cuba were well below the average for these years. These all source import prices, are considerably higher than those in the USA and in Europe; one reason for this could be that much of the fruit is probably transported long distances overland before arrival in Canada. Having arrived in Canada the fruit then has to be distributed, again over long distances to the main centres of population; the cost of internal distribution added to the high import value suggests that retail prices will be high, which is probably a prime factor determining the low level of consumption and static nature of this market.

Part II

THE MARKET SITUATION IN EUROPE

General

The markets of those European countries — the UK, Switzerland, Sweden and the EEC countries — selected for detailed study differ from those in the other countries studied (except Japan) in two respects — firstly demand has been growing strongly and secondly there are in effect two markets in these countries — one for luxury fruit and one for other fruit.

Table 3 shows that imports* have risen from 11 456 tons in 1961 to 35 991 tons in 1970, an increase of over 300 per cent. France is by far the largest net importer of pineapples of the eight countries under consideration, accounting for 42 per cent of the total in 1970, followed by the United Kingdom, 20 per cent, and the Federal Republic of Germany, 17 per cent. France also has a fairly substantial re-export trade in pineapples, exporting just over 2 000 tons in 1970. It can be seen from Table 3 that imports into all these countries were considerably higher in 1970 than in 1961, the percentage increase being greatest in Italy and least in the Federal Republic of Germany.

As shown in the histograms (Figs. i. to viii.) the seasonal distribution of imports falls into one broad pattern — in all of the countries studied imports are concentrated in the months October to April and in most there is a large peak in December and a smaller one at Easter. However, this pattern varies by countries and by years within a particular country; for example in the UK, Belgium and the Netherlands the spring peak is generally the bigger. The spring peak in the UK can be explained by the fact that it is the time when most exports come from her chief supplier, i.e. the Republic of South Africa, and in Belgium and the Netherlands as a result of the Easter demand. In all the European countries studied, imports are very limited during the summer months, partly because supplies from the major exporting countries are limited at this time³, but largely because of the competition afforded by indigenous European fruits during the summer months. The seasonality aspect of the pineapple trade will be dealt with in greater detail in the studies of individual countries.

There is a small trade in high-class fruit intended for the luxury market imported principally from the Azores and Kenya.

The luxury market

The luxury market requires definition; it comprises that fruit which arrives in the consuming countries within a few days of harvesting, either coming by sea from

*See footnote to Table 3

The Republic of South Africa is the chief supplier of pineapples to the United Kingdom; during the first six years of the period she supplied over 70 per cent of UK imports of pineapples, but over the past four years, when total imports rose, her share of the market increased to 80 per cent in 1967 and 1968 and to nearly 90 per cent in 1969 and 1970.

The Azores sea-freights her supplies and remained the second largest supplier of fresh pineapples to the UK until 1970 when her place was taken by Kenya. Despite small recoveries in some years, supplies from the Azores have tended downwards throughout the period. Her share of the market has declined from an average of 15 per cent in the early years to about 6 per cent in 1968; this was followed by a significant decline in actual quantity in 1969 and 1970; in the latter year the Azores' supplies of only 202 tons were under half the amount supplied (480 tons) in 1961. While imports from the Azores have been declining, Kenya has increased her air-freighted supplies; supplies have fluctuated during the period, but in 1970 they reached a peak of 291 tons, 4 per cent of total imports. Ivory Coast fruit (shown as imports from France in the Trade Returns) began to appear on the market in 1965 and supplies have fluctuated since, averaging around 50 tons in 1969 and 1970. These pineapples are sea-freighted to Marseilles and then sent overland to the UK; however only large fruits of high quality are re-exported to the UK and these Ivory Coast pineapples thus compete with fruit from Kenya and the Azores on the luxury market. The West Indian Islands — Jamaica and Dominica — supply a small quantity of pineapples to the UK market. Cuba emerged as a minor supplier in 1970 with 201 tons.

Provisional figures for 1971 show imports of fresh pineapples to be lower than for the same period in 1970. By the end of July 1971 they stood at 4 649 tons compared with 5 302 tons in 1970. Most of the drop can be attributed to reduced supplies from the Republic of South Africa at the beginning of the year and it is only in June and July that exports from that country reached 1970 figures. Both Kenya and Cuba have increased their imports greatly over 1970 figures. By July 1971 Kenya had exported 511 tons compared with 109 for the same period in 1970, and Cuba's exports had reached 291 tons compared with 201 tons in 1970. This increase in Kenyan supplies is discussed in more detail later. (p 25).

Imports of pineapples for the luxury market rose to a peak of 703 tons in 1963 but then fell gradually to 621 tons in 1968, slumped badly to 391 tons in 1969 before recovering to reach 557 tons in 1970. Thus, although total imports of pineapples into the UK are increasing, imports for the luxury market are not, and in fact this market appears to have declined in size as well as share.

France

France is the largest importer of fresh pineapples in the European countries surveyed and is among the five largest in the world (Table 3). Between 1961 and 1970 gross imports (see Appendix B, Table 12a) of pineapples rose by 415 per cent, from 4 182 tons to 17 385 tons. Imports increased steadily from 1961 to 1966, jumped in 1967 to over 14 000 tons and remained at this level until 1970 when imports rose again to over 17 000 tons.

During this period, the most important supplier has been the Ivory Coast, supplying over 50 per cent of the total in latter years. At the beginning of the period supplies from the Cameroons were important, accounting for 18 per cent of the total in 1961. Supplies from this source increased slowly to a peak of 1 249 tons in 1966; thereafter the trend in actual supplies was downwards and her share was markedly lower — under 5 per cent in 1970 — than in the earlier years. Throughout the decade Martinique has been increasing her supplies of fresh pineapples to France and is now second only to the Ivory Coast in importance; in 1970 she supplied 5 153 tons, 29 per cent of the total. Supplies from Guinea have increased although they fluctuate somewhat from year to year. The Azores,

although a steady supplier, is now of minor importance, her supplies have averaged 238 tons per annum over the decade.

It should be noted that France has a substantial re-export trade in pineapples which has developed as follows:—

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Tons	93	71	225	529	998	1 349	2 311	1 356	1 173	2 037
Value '000 Francs	191	162	443	1 112	2 018	2 760	4 287	2 484	2 327	3 863

France re-exports pineapples mainly to the Federal Republic of Germany, her other markets include Belgium, Spain, Switzerland and Italy (see Appendix B, Table 12b). (Most of these countries do not show corresponding data in their import returns; it is assumed, therefore, that they are shown against the country of origin.)

The French luxury market averaged 238 tons during this period, this being the quantity imported from the Azores.

The Federal Republic of Germany

Imports of fresh pineapples into the Federal Republic of Germany (see Appendix B, Table 13) showed a downward trend from 1961 to 1964, falling from 3 552 tons to 1 995 tons. From 1964 to 1968 imports rose, there was a slight drop in 1969, but in 1970 total imports rose to a record 6 486 tons, nearly twice the 1961 figure. This trend pattern is similar to the UK's and it is concluded that this is due, once again, to the improved quality of fruit available (i.e. the switch from Brazil to other suppliers) and promotional activities.

Brazil was the major supplier from 1961 to 1966 although the amount she supplied declined throughout these years. In 1961 she supplied 78 per cent of the market, whereas by 1967 her share was only 16 per cent. The Ivory coast has latterly emerged as the Federal Republic's main supplier, partly because of the better quality of her fruit owing to a much shorter journey, and partly because of the tariff advantages enjoyed by the Ivory Coast as the EEC adopted a common tariff. Between 1967 and 1970 the Ivory Coast supplied over 45 per cent of total imports. Until 1966 the Azores was the second largest supplier of pineapples to the Federal Republic despite the fact that supplies declined suddenly in 1964; since that year supplies from this source have averaged about 320 tons per annum. Guinea, Kenya, Costa Rica and Martinique are minor suppliers to this market. Cuba re-emerged as a supplier in 1968, and in 1970 supplied 672 tons, 10 per cent of the total.

The market for luxury pineapples in the Federal Republic of Germany is relatively small in relation to her total imports but is nevertheless, on average, the second largest in Europe and contrary to most has expanded in the last two years. In 1968 and 1970 imports from the Azores, Kenya and Taiwan averaged 9 per cent of the total and in 1969, when total imports fell, 14 per cent of the total. It would appear that this expansion was due to the removal of tariffs on imports from the East African Common Market (EACM) which principally affected Kenya and the promotional activities of one import group in particular.

The Netherlands

Gross imports of fresh pineapples into the Netherlands (see Appendix B, Table 14) fluctuated up to 1966 (when they were 117 tons) but since then have risen rapidly. In 1970 imports had reached 2 014 tons, an increase of 294 per cent over the 1969 figure (683 tons). Although in 1970 1 186 tons were re-exported, mainly to Germany, domestic consumption still rose from 358 tons in 1969 to 828 tons in 1970.

From 1961 to 1965 Brazil was the chief supplier of pineapples to this market, accounting, for example, for 73 per cent of the total in 1965 (117 tons). Since then supplies have fluctuated erratically but in no year was she the chief supplier; her supplies showed a marked recovery in 1970 to 479 tons (23 per cent of the total). Her place was taken first by France — presumably re-exports of Ivory Coast origin — and more recently by Cuba. In 1969 and 1970 Cuba supplied over 40 per cent of the market (318 and 847 tons) whereas France only supplied 15 per cent in these two years (152 and 266 tons). Other occasional suppliers include the Azores, the Ivory Coast (direct imports), the Federal Republic of Germany, Kenya and the USA.

The luxury market accounted for less than 2 per cent of net imports in 1970 and is therefore insignificant.

Belgium and Luxembourg

During the period 1961 to 1970, imports of pineapples into Belgium (see Appendix B, Table 15) reached a low of 101 tons in 1963 but since then they have risen fairly steadily to 1 862 tons in 1970, although there was jump of over 400 tons between 1967 and 1968 as imports rose from 574 to 961 tons. French re-exports (presumably originating from the Ivory Coast and Martinique) are the main source of fresh pineapples for Belgium. The percentage of the total supplied by France has risen from 57 per cent in 1965 to over 80 per cent in 1970. Supplies from the Azores fluctuated during the ten year period; these supplies form the majority of Belgium's luxury market, comprising about 7 per cent of the total in 1969. The Republic of South Africa supplied this market in the early years but has stopped doing so now. The Ivory Coast accounted for 10 per cent of supplies in 1968 and 1969.

Italy

Imports of fresh pineapples into Italy (see Appendix B, Table 16) have increased steadily from a mere 97 tons in 1961 to 2 202 tons in 1970. In 1962 the Ivory Coast started to supply Italy with pineapples and since 1963 she has supplied over 70 per cent of Italian imports; in 1968 and 1969 the figure rose to 80 per cent. Other countries, including the Azores, France, Guinea and Martinique supply this market.

In 1961 the luxury market amounted to 99 per cent of the total but since then, while imports have been rising the share of the luxury market has been falling, until in 1968 the luxury market only amounted to 10 per cent of the total. In 1969 the figure fell even lower to 6 per cent, partly because supplies from the Azores had declined and partly because total imports had increased. Clearly there is little prospect for growth in the luxury market in Italy.

Sweden

Imports of fresh pineapples into Sweden (see Appendix B, Table 17) remained static from 1961 to 1964 but then increased rapidly to reach 698 tons by 1970. The most rapid increase came between 1969 and 1970 when imports almost doubled. The Azores supplied this market throughout the period; imports from this source rose to a peak in 1968, 31 per cent of the total, but since then they have fallen, accounting for only just over 5 per cent of the total in 1970. The Ivory Coast started supplying the Swedish market in 1967 and in 1970 provided 20 per cent of the total. In 1970 other important suppliers were Brazil, 13 per cent of the total, Cuba and Martinique, both supplying 12 per cent, Puerto Rico and the USA, 10 per cent and Kenya, 7 per cent. A feature of the Swedish market in 1970 is that, as well as nearly doubling in size, supplies were obtained from a great variety of sources; this shows that the market is very open in nature

at present though it is possible that there may be a decline in the number of suppliers as importers' and consumers' preferences become established.

The luxury market in Sweden, supplied by the Azores and Kenya (apart from 1966 when the USA supplied 6 tons) accounted for nearly 13 per cent of the total in 1970 (89 tons) — the second largest percentage of the eight European countries studied, although in 1968 47 per cent of imports were for the luxury market.

Switzerland

Prior to 1968, the Swiss did not show imports of fresh pineapples as a separate category; the estimates shown in Table 3 are derived, on the basis of origin, from the appropriate composite category.

Estimated imports of pineapples into Switzerland rose steadily from 124 tons in 1961 to 600 tons in 1967. In 1968, when actual rather than estimated data were available, imports apparently doubled. In 1969 there was a slight decline in imports before they rose to 1 447 tons in 1970 (see Appendix B, Table 18).

The main supplier of pineapples to Switzerland is the Ivory Coast, averaging about 70 per cent of total supplies in each of the last three years. Kenya is the second largest supplier, accounting for 9 per cent of the total in 1970. Other suppliers include the Azores, Ghana, Taiwan and Cuba.

Luxury fruit from the Azores, Kenya and Taiwan totalled 228 tons in 1970, 15 per cent of the total and Switzerland has the largest luxury market in percentage terms of any of the eight European countries studied; it should be noted that this luxury market is continuing to expand, and is maintaining its share of the total.

Quality requirements

For the fresh fruit market, colour and the condition of the crown are the leading quality characteristics of the pineapple, since the fruit is judged initially, some would say, entirely on its external appearance. When fully ripe the fruit should have a clear, bright appearance — consumers generally show a marked preference for fruit of a deep yellow or orange, coppery shade, a green colour being associated with under-ripeness. The crown leaves should be turgid and bright green; leaves which are turning brown at the edges, or are limp, detract from the appearance of the fruit and usually reduce its market value. Buyers on European markets require pineapples with straight well-developed crowns. Hitherto flavour has been of secondary importance to appearance for luxury fruit, since these pineapples are frequently used to decorate a fruit basket and therefore large attractive fruit are required.

Generally speaking pineapples for European markets should weigh between 0.7 kg (1½ lb) and 1.5 kg (3¼ lb) although high quality fruit for the UK market may weigh as much as 2.7 kg (6 lb). The most common preference is for fruit weighing between 1 kg (2¼ lb) and 1.25 kg (2¾ lb) although in the Netherlands, Switzerland, Belgium and the UK there is a market for smaller pineapples, especially during the summer months.

On most of the markets studied there is a preference for fully mature pineapples. However in the UK, Sweden and Switzerland pineapples are preferred 'two-thirds coloured' to allow for time spent in distribution channels.

Harvesting, packing and transportation

Care in harvesting and subsequent handling is essential if pineapples are to arrive on the various world markets in peak condition. In spite of their robust appearance, pineapples, in particular many strains of Smooth Cayenne, are very delicate

fruit, extremely susceptible to bruising and other mechanical injury during transit. Careless handling, especially pressure of the fingers and thumb when the fruit is handled causes bruising which may not necessarily develop immediately. The stage at which pineapples are harvested also has a considerable effect on their quality; pineapples which are picked when unripe never attain the fine appearance of fruit picked fully ripe. Fruit which has been harvested when too immature cannot always be successfully ripened artificially and it may have an acid taste, and if it colours may develop a distinctive yellow tinge³.

For export, pineapples should be picked in the coolest part of the day, where possible, and in addition they should either be pre-cooled or allowed to lose their field-heat, before packing for shipment. If the fruit is harvested when it is moist excess moisture should be allowed to dry before packing, otherwise mildew can quickly develop on the surface of the skin. The fruit should be harvested with a sharp knife leaving a portion of stalk which may later be trimmed to approximately $\frac{1}{2}$ in (or 1.25 cm); this short stalk protects the base of the pineapples if the fruit is packed upright. Some exporters remove the central portion of the crown in order to facilitate packing and reduce the gross weight of the carton. This fruit would not meet the luxury market requirements which requires the crown to be intact.

Pineapples for export must be carefully graded as regards maturity and size, so that in any container the fruit presents a uniform appearance. Size grading is of particular importance to retail outlets, where pineapples are sold on a price per unit basis.

Various containers have been used for shipping pineapples to world markets. Wooden boxes were formerly used by all exporting countries, but in recent years many exporters have begun to use fibreboard cartons with internal divisions.

The Azores is one country that continues to use wooden containers for pineapples. These containers are shallow wooden boxes measuring 41 x 21 x 9 in (holding 8 to 16 pineapples) or half-boxes measuring 21 x 20 x 9 in (containing 4 to 7 fruits). The fruit is packed in wood wool to prevent bruising, and is sometimes covered with blue tissue paper to improve the appearance of the pack. Although the half boxes are preferred by importers because they are easy to handle, in general the Azores pack is considered cumbersome, comparing unfavourably with the fibreboard containers used by other exporters.

Exporters in the Ivory Coast use a specially designed container known as the Secal carton, which was developed after considerable research by the Institut Français de Recherches Fruitières d'Outre Mer, and is patented. This container supports each pineapple at the base and shoulder where it is least likely to suffer bruising, and the delicate fleshy parts of the fruit are well protected⁴. The South African industry has experimented with the Secal carton and also with a similar container known as the Shelford carton in which the pineapples are packed upright, the butt held in a $\frac{3}{4}$ in thick pad of polystyrene which helps to prevent bruising at the base, while the neck is held firm in a cardboard collar, and a plastic button inserted in the crown, replacing the larger leaves.

The Kenyan pineapple industry uses a comparatively light-weight sectionised fibreboard carton in which the pineapples are packed vertically, generally six to a carton. This container has proved reasonably satisfactory for the air freight trade although occasionally large fruit does suffer bruising when these light-weight cartons are badly stacked or carelessly handled.

The major disadvantages of fibreboard cartons are their poorer stacking strength compared with that of wooden boxes, and similarly their reduced resistance to rough handling. In a poorly ventilated space, the cartons may absorb moisture and various post-harvest pathogens may develop on the fruit at the point of contact with the carton; ventilation and humidity should be such as to maintain the turgidity of the fruit during transit. The main advantage of fibreboard

cartons is that they are lighter than wooden boxes, which is of significance as regards the air-freight trade; they are also generally easier and more pleasant to handle.

The number of fruit packed in a carton will depend on the weight and quality of the fruit and the market to which it is consigned. Generally speaking 'luxury' fruit are packed 4 or 6 pineapples to a carton, while other grades are packed 10's, 12's or 15's to a carton.

A further development in the shipment of pineapples which could be of an increasing importance globally is the use of refrigerated containers such as is practised by the Ivory Coast⁵. The main advantages of these containers are that they reduce the number of handling stages and enable pineapples and any other produce carried to be shipped at their optimum temperatures.

The majority of fresh pineapples are shipped in refrigerated or ventilated holds to distant markets. The optimum storage temperature for pineapples is considered to be in the range of 7°C to 10°C; the ideal temperature within this range depends on a number of factors, stage of maturity at harvest, variety etc. A lower temperature could lead to chilling injuries – the fruit take on a dull due, develop water soaking of the flesh and darkening of the core. They will be particularly subject to decay when removed from cold storage. At higher temperatures, ripening proceeds rapidly and fungal development may not be inhibited. The usual storage life of a pineapple is of the order of 2 to 4 weeks⁶.

Some pineapples are air-freighted. Air transport is still relatively expensive but it does have the advantage that the fruit can be picked nearer the optimum stage of maturity for eating and this improvement in quality and the associated increase in returns have offset the cost of air transport.

Barriers to trade

Tariffs

The duties levied on imports of pineapples into the countries under discussion are summarised below:—

Country	Tariff	Exceptions
Argentina	60 per cent <i>ad valorem</i>	Members of LAFTA 1.8 per cent <i>ad valorem</i>
Japan	20 per cent <i>ad valorem</i>	
Canada	Free	
United Kingdom	10 per cent <i>ad valorem</i>	
EEC countries	9 per cent	Commonwealth and the Republic of South Africa — Free Associated Territories — Free
Sweden	Free	
Switzerland	15.00 FR/100 kg Gross	

United States

	Unit of quantity	Rates of Duty	
		1	2
In bulk	No	1—1/6¢ each	1—1/6¢ each
In crates	Crate of 2.45 cu ft	35¢ per crate of 2.45 cu ft	50¢ per crate of 2.45 cu ft
In packages other than crates	Crate equivalent of 2.45 cu ft	27¢ per 2.45 cu ft	50¢ per crate of 2.45 cu ft

1. Preferential tariffs are still shown in the US Customs schedule for Cuba though they are suspended at present.

2. For the USA rates of duty Column 1 shows the most favoured nation rate and other 'free world' goods and Column 2 the full rate which applies to all Communist countries except Poland and Yugoslavia.

Quotas

There are no quotas in international trade on fresh pineapples.

Internal Taxes

	Value added tax
France	7.5 per cent
Federal Republic of Germany	11 per cent
Belgium	6 per cent
Netherlands	4 per cent
Luxembourg	5 per cent
Italy	No VAT in Italy but Internal Tax of 4 per cent

Phyto-sanitary regulations

The only country having specific regulations for pineapples is France who forbids the importation of fruit infested with cochineal insects. Fruit exported to France or Sweden must be accompanied by a phyto-sanitary certificate. Italian 'phyto-sanitary' regulations may restrict imports at certain times of the year but these regulations change annually.

The market situation in individual countries

The United Kingdom

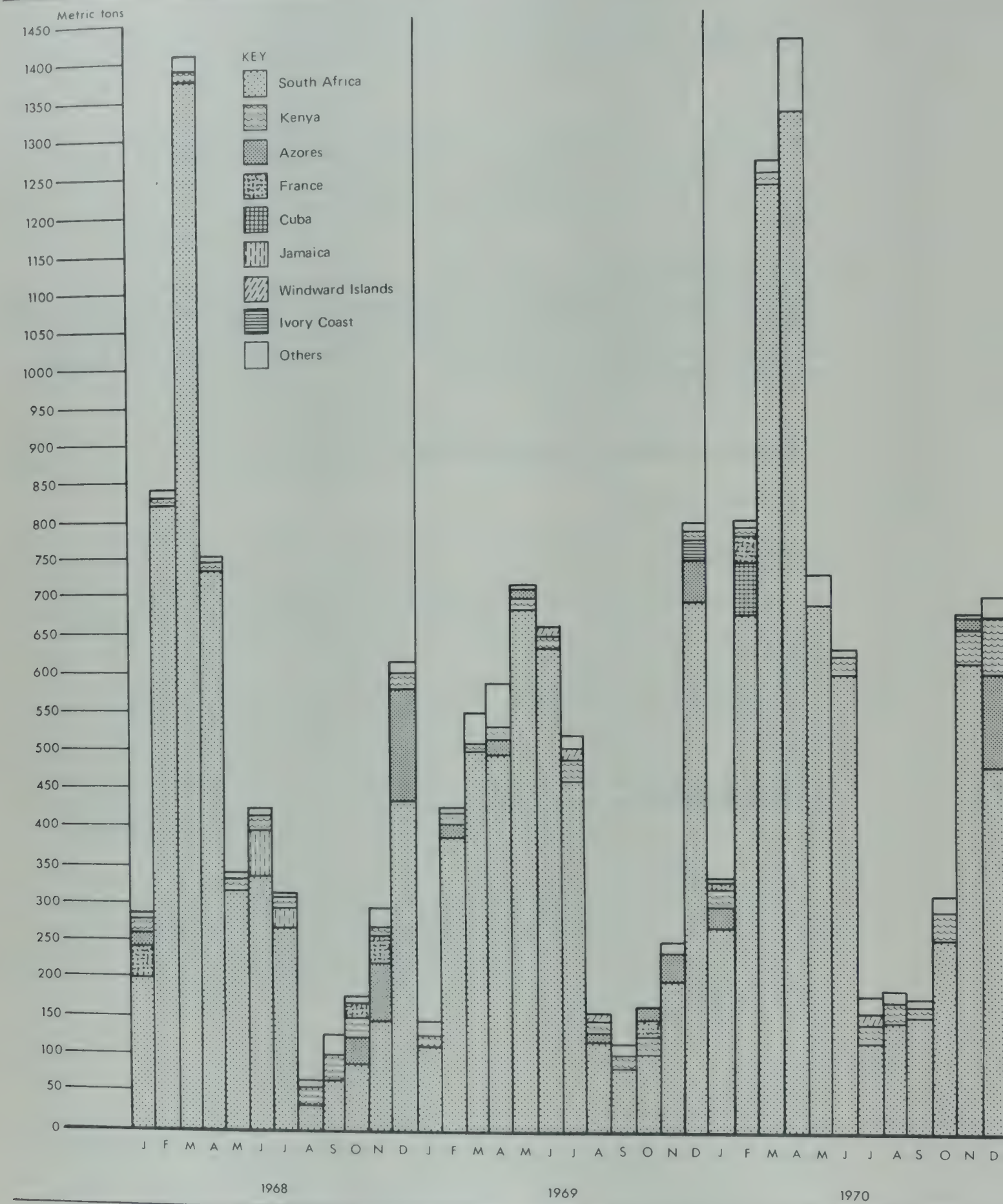
Seasonality

The seasonal distribution histogram Fig. (i) shows that there are two peaks in imports, one pre-Christmas and the other in the spring; in 1968 and 1970 the spring peak was the larger but in 1969 the former was. The Republic of South Africa, Kenya and the Azores are the main suppliers to the UK market, the Republic of South Africa and Kenya being the only countries to supply this market throughout the year. Supplies from the Republic of South Africa are greatest in December (because of the Christmas festivities) and in the spring (the latter peak usually being the largest) and lowest in the summer months largely because of competition from other fruit. Kenya has no definite peak apart from the one occurring in December 1970, although more is supplied in the latter half of the year, probably because more formal dinners are held then. Imports from the Azores reach a peak in the winter months i.e. November to February, and a low in July to October when little or none is supplied. Imports from the Ivory Coast and France also occur mainly in the winter and imports from the West Indies (Jamaica and the Windward Islands) in June and July. In 1970 Cuba supplied fresh pineapples in February, as shown in the histogram, as well as in other unspecified months.

Distribution

Most of the pineapples come by sea and few of these are destined for the luxury market. Supplies from the largest supplier — the Republic of South Africa — arrive in Southampton and are distributed by the importers from there to the London and provincial markets. Normally the ship docks on Monday and the fruit can then be discharged on Tuesday in time to be on the wholesale markets by Thursday; this is important since any significant delay in arrival or discharge means that the fruit fails to arrive on the wholesale markets in time to be sold during the week it arrives. More than half the South African fruit imported is handled by one importer, the remainder being handled by a number of firms. This non-luxury sea-freighted fruit is widely distributed through retail outlets — fruiterers/greengrocers, supermarkets and in some instances street markets, the last named particularly if there have been delays in arrival or distribution. Fruit from the Azores and selected fruit from the Ivory Coast arrives by sea, the latter

Figure (i)
Pineapples Monthly imports into the United Kingdom 1968-70



Source: Fruit Intelligence, Commonwealth Secretariat

after an overland trip through France, although it is destined for the luxury market.

Air-freighted fruit arrives principally at Heathrow where it is cleared and transported to the consignees in the wholesale markets by firms handling air cargo (there is one particular firm which dominates in the handling of perishable

produce). The main outlet for this fruit, and for the luxury quality sea-freighted fruit, is the catering industry; hoteliers and restaurateurs frequently use the very handsome fruit as a centre piece for fruit baskets. As formal dinners and banquets are at their height in December and January, sales of this fruit are highest at this time of the year. There are also retail sales of luxury fruit by exclusive fruiterers.

The increasing interest shown by retail chains in the sale of fresh produce is having its effect on the trade in pineapples. None of these chain stores is so far dealing direct with overseas suppliers but there are arrangements whereby the chain purchasing the fruit obtains supplies through a market firm but not by daily purchases in the wholesale markets. Much of the increase in Kenyan supplies in 1971 can be attributed to this type of link up and is not therefore part of the luxury fruit market as defined hitherto, i.e. the fruit is not very large, nor is it primarily destined for the catering industry.

All initial importation is done on a consignment basis, the importer selling on commission.

Prices

Average cif import values of pineapples over the last five years were as follows:—

	new pence per kg				
	1966	1967	1968	1969	1970
All sources	13	13	13	15	13
Republic of South Africa	12	13	15	15	12
Kenya	18½	19½	17½	24	27½
Azores	16½	16½	12	16½	25
France (Ivory Coast)	25	22	14	14	18½
Jamaica	17½	14	14	...	...

... not available

Source:—Derived from *Official Trade Returns*

With the exception of 1969, average all source import prices were steady, despite the increase in imports. Over the five years, 1966–1970, average import prices for South African pineapples rose to 15p and then fell back to 12p. This fall could either be a result of poor quality or of oversupply, although the wholesale price, Table 5, has not fallen. However, it is probable that published wholesale prices, which are averages, have not included low value sales of fruit surplus to demand or delayed in transit. Prices paid for pineapples on the luxury market have risen quite substantially over the years and by 1970 import prices for both Kenyan and Azores pineapples were double that of South African, partly because of transport costs but also because of the high quality of the fruit. Import prices for Kenyan pineapples rose steadily (1968 excepted) while those for the Azores remained steady until 1970 when there was a large increase in the import price. It is interesting to note that while supplies of luxury fruit rose in 1970 compared with 1969, average import prices per kg were higher in 1970 than in 1969.

Wholesale prices of pineapples over the last three years are summarised in Table 5. Unfortunately the prices given are for individual fruits and may therefore be affected by the size of the pineapple, besides normal supply and demand factors. However, as a rough guide, pineapples from the Azores and Kenya are usually of approximately 2 kg in weight (4–4½ lb), while fruit from the Republic of South Africa normally weighs between 0.7 kg (1½ lb) and 1.1 kg (2½ lb).

Wholesale prices for luxury pineapples range between about 50p per piece to about 70p per piece but there is no regular monthly pattern of prices. On average Kenyan wholesale prices have tended to be slightly higher than prices for Azores pineapples, reflecting the difference in import prices. South African

Table 5
Average wholesale prices of fresh pineapples at selected markets in England and Wales

Price in new pence per piece		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual Range	
														Low	High
Azores	1968	49	—	—	50 (a)	53 (a)	42	—	—	77½(b)	67½(b)	41	56	41	77½
	1969	36 (b)	51	48 (b)	48½	50	—	54	70 (a)	51½	50 (b)	50 (a)	61½	36	70
	1970	34½(b)	—	42½	43½	55	63 (a)	—	—	—	66½	48½	57	34½	66½
	1971	40 (b)	40	42	—	57½(b)	—	—	—	—	—	—	—	40	57½
Kenya	1968	39	59½	75½	59	64½	61	59 (b)	71	68	64	49	58	39	75½
	1969	50	54	52	60	62½(b)	60 (a)	—	55½	59½	64	60	62	50	64
	1970	55	—	54½	60	75 (b)	80 (b)	58½	63½	63½	67	55½	55½	54½	80
	1971	46	56½	56½	50½	48½	51	—	—	—	—	—	—	46	56½
Republic of South Africa	1968	15	13½	11½	11 (b)	12	15½	11½	13	17½	13	15	15	11	17½
	1969	14	16	13	16	14½	14	12	13½	15	16	16	14½	12	16
	1970	12½	—	13½	13	14	16½	12½	19 (b)	15	15½	16	13½	12½	19
	1971	14	17½	17	16½	16	15½	—	—	—	—	—	—	14	17½
Ivory Coast	1968	26 (b)	—	—	—	40 (a)	—	—	—	—	—	26 (b)	21 (a)	21	40
	1969	—	—	—	—	—	—	—	—	—	32½(a)	—	—	—	32½
	1970	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1971	—	—	—	—	25 (a)	18 (a)	—	—	—	—	—	—	18	25

(a) Prices quoted for 1 week only

(b) Prices quoted for 2 weeks only

Source: —Fruit Intelligence Commonwealth Secretariat
Ministry of Agriculture Fisheries and Food

— no price quoted

... not available when the report was compiled

pineapples fetch from 11p to 19p at wholesale and also show a relatively random pattern of price fluctuations. Although fruit from the Ivory Coast (France) is primarily for the luxury market, both the import price and the wholesale price tend to be lower than for fruit coming from the Azores or Kenya, which would seem to suggest that this fruit is not of such a high quality as other fruit entering the luxury market.

The wholesale price is approximately equal to 110 per cent of the import price and between the wholesale and retail stages there is a margin of about a third of the wholesale price.

Prior to 1971, pineapples from the Azores and Kenya were chiefly sold to catering establishments, although if sold at retail they often fetched 75p a piece or more. Since the recent development, whereby some supermarkets are buying air-freighted fruit to sell in their stores, there has been a considerable downward shift in the retail price of air-freighted fruit. This is largely due to a reduction in the size of the fruit from 2 kg (4–4½ lb) to 1 kg (2–2½ lb) and now most fruit sold in such stores retails at around 50p per piece.

To give an idea of the fob return which can be expected from sending air-freighted pineapples to the UK, the following figures – based on Kenyan prices – show the amount which is left after deducting external transport, handling costs and commission.

	p	p	p
Wholesale prices for 2 kg fruit	50	60	70
Freight charges	32	32	32
Commission – 10 per cent of wholesale price	5	6	7
Charges from Airport and handling at market	1	1	1
	—	—	—
<i>Estimated fob return</i>	<u>12</u>	<u>21</u>	<u>30</u>

This amount has to cover production costs, costs of transport to the point of departure, packing and profit on a 2 kg fruit.

Pineapples from South Africa generally retail at up to 30p per piece, depending on the state of supply.

France

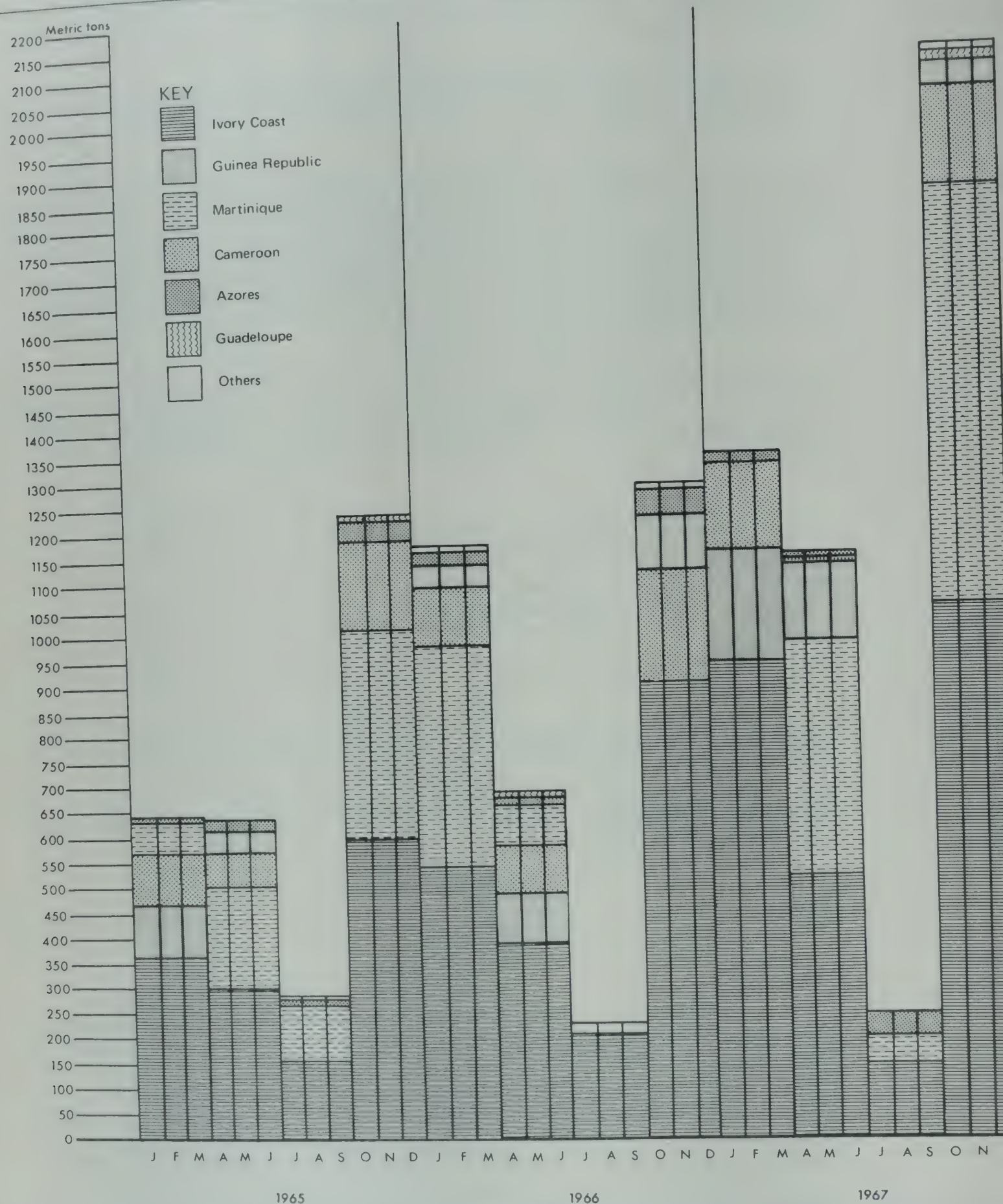
Seasonality

Unfortunately quarterly import data have not been published since 1967, but Fig. (ii) shows quarterly imports of fresh pineapples into France during the years 1965–1967. From this histogram it can be seen that imports into France were greatest in the last quarter and they fall off in the first two quarters until a low is reached in the third quarter. The Ivory Coast is the principal supplier throughout the year whereas Martinique supplies most of her pineapples in the winter months. Supplies from Guinea fluctuate and have no seasonal pattern. Supplies from the Cameroons fall off noticeably in the third quarter. The reduction in imports of fresh pineapples in the summer is attributed to the competition from cheap home grown fruits.

Distribution

Virtually all pineapples imported into France are sea-freighted and are received at the ports of Dieppe, Le Havre and Marseilles. The small quantities of pineapples air-freighted from the Ivory Coast, at Christmas-time for example, are sent to Paris. During the peak of the season in the Ivory Coast, ships carrying between

Figure (ii)
Pineapples Average monthly imports into France 1965-67



Source: Commerce Extérieur Direction Générale des Douanes et Droits Indirects

150 and 250 tons arrive in Marseilles every five days. These pineapples are then shipped on by road or rail to the rest of France and as much as 30 per cent of the consignment may be re-exported to Germany, Switzerland, Belgium and the UK. Towards the end of 1970 the Cameroons and the Ivory Coast sent their first shipments of pineapples in refrigerated containers and these fruits compared very favourably with those shipped by more traditional methods⁵.

According to an EEC study of the markets for tropical fruits, 70 per cent of the total tonnage of fresh pineapples is handled by two importers, while another six or eight handle the remaining 30 per cent⁷. Apparently importers of pineapples are also frequently concerned with the banana trade, since these fruits are grown in roughly the same areas.

Pineapples are, with the exception of bananas, the best known and most widely distributed of the tropical fruits imported into France. The Paris region apparently accounts for just under 30 per cent of consumption. Retail distribution is also very wide since even the traditional retail outlets will stock this well established fruit. Nevertheless it seems likely that the major proportion of sales are now made through supermarkets. Azores pineapples however, are sold almost exclusively by luxury outlets.

Prices

Average cif import prices for fresh pineapples over the past five years are as follows:

	Fr/Kg				
	1966	1967	1968	1969	1970
All sources	1.62	1.56	1.35	1.41	1.58
Ivory Coast	1.57	1.53	1.30	1.51	1.77
Martinique	1.76	1.70	1.40	1.33	1.23
Cameroons	1.46	1.45	1.02	1.03	1.72
Guinea	1.43	1.18	1.22	1.11	1.18
Portugal (Azores)	2.35	2.34	2.46	2.67	2.85
Guadeloupe	1.59	1.83	1.41	1.24	...

... not available

Source: *Derived from Official Trade Returns*

Average all source import prices fell in 1968 but rose again in 1969 and 1970 and despite the large increases in supplies, import prices have shown no tendency to decline. Import prices for fruit from Martinique declined 1966 to 1970, as did those for the Ivory Coast and the Cameroons until 1970 when they suddenly rose. Prices for Azores pineapples are higher than those for fruit from other sources as this fruit is for the luxury market; these prices have continued their upward trend.

Wholesale prices paid for pineapples at Les Halles during 1968 to 1970 are shown in Table 6. Up to March of 1969 Ivory Coast and Martinique pineapples were fetching the same wholesale price despite the fact that their import prices differed. After March 1969, the wholesale prices for Martinique pineapples were generally lower, largely because of the poor quality of the fruit⁵. It will be noted that there is a standard price for Azores pineapples for a season (starting in October), this is due to the trading agreements involved whereby the firms selling Azores pineapples agree to maintain a common price, the price presumably being approved by the supplier. Increases were made for the 1968/69 and 1969/70 seasons but not for the 1970/71 season when the price stayed at 6.20 Fr/kg. At the wholesale stage, pineapples from the Azores are nearly three times as expensive as those from the Ivory Coast whereas they are only just under twice as expensive at the import stage. A small part of the difference is made up by the 9 per cent import duty levied on pineapples from the Azores. The much higher distributive margin for luxury than for other pineapples shows how select this sector of the market is.

Table 6
Average wholesale prices for pineapples at Les Halles 1968-1970
Fr/kg

		Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
Azores	1968	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.80	5.80	5.80
	1969	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	6.00	6.20	6.20	6.20
	1970	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20
Ivory Coast	1968	1.85	2.33	2.22	2.10	2.10	1.80	1.70	1.60	1.82	1.83	1.85	2.20
	1969	2.85	2.80	2.28	2.48	2.75	—	—	—	2.25	2.02	2.65	3.74
	1970	3.00	2.35	2.40	2.40	2.50	2.06	2.00	—	2.50	2.50	2.60	2.64
Martinique	1968	1.85	2.33	2.22	2.10	—	—	—	—	—	1.83	1.85	2.20
	1969	2.85	2.80	2.11	2.13	2.60	3.00	2.80	2.80	2.35	2.00	2.20	3.22
	1970	2.33	2.00	2.15	2.25	2.20	1.87	—	—	2.05	2.10	2.10	2.52

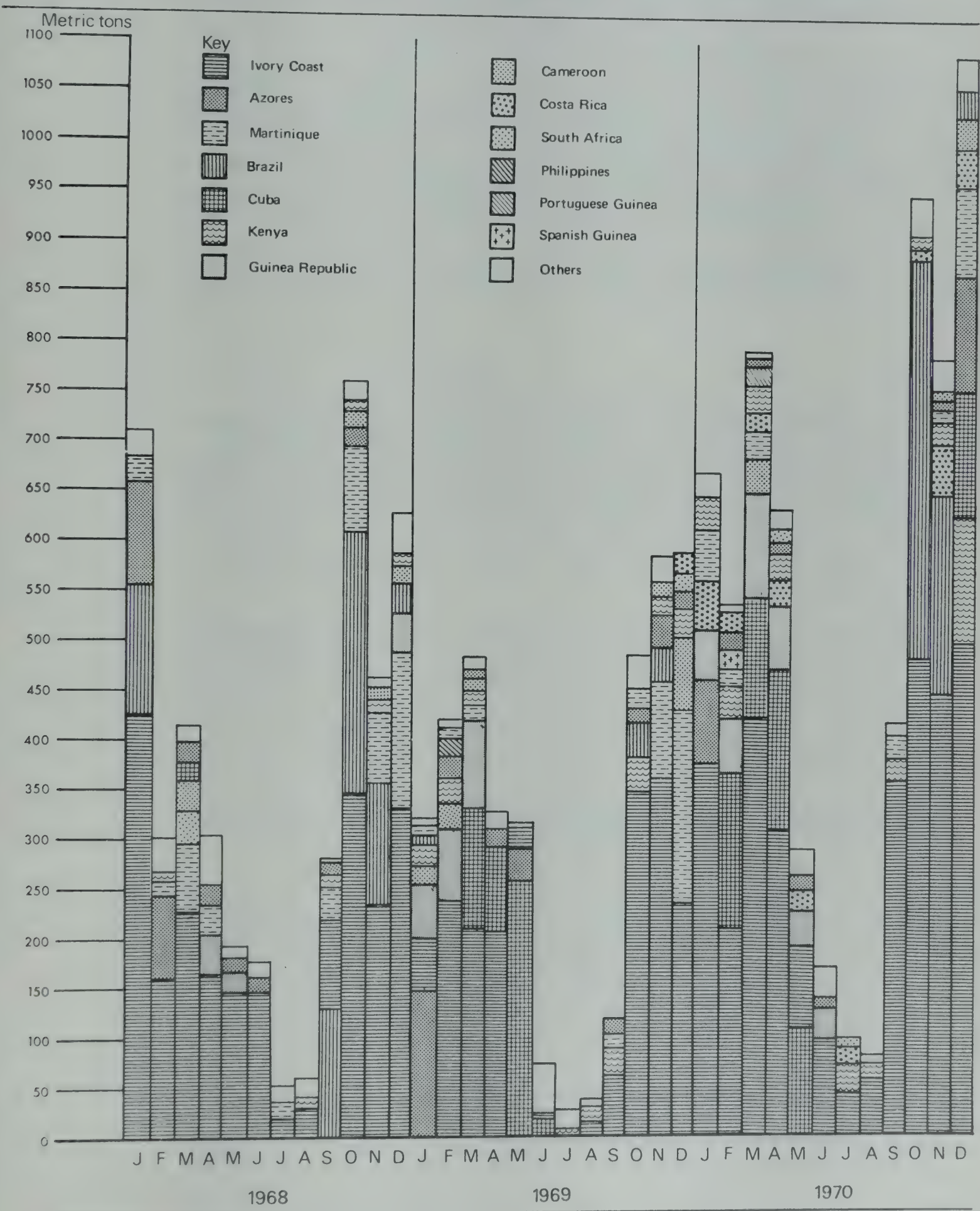
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Source: Derived from *Fruits* 1971, 26, (2), 149
1970, 25, (1), 67
1969, 24, (1), 67

Seasonality

Unfortunately, the breakdown by supplying countries in the Federal Republic of Germany's monthly trade statistics is far from complete so it is not possible to derive a detailed month by month picture.

Figure (iii)
Pineapples Monthly imports into the German Federal Republic 1968-70



The seasonal distribution histogram Fig (iii) shows that imports of pineapples into the Federal Republic of Germany are greatest during the period October to March, the Ivory Coast being the main supplier.

Imports during the months June to September are of minor importance. The recent increase in imports into the Federal Republic has taken place mainly during October to April, the largest increases occurring to meet the demand at Christmas and Easter. The Ivory Coast and the Azores supply this market throughout the year although their supplies are limited in the summer months. Martinique supplies pineapples from October to February and Brazil from September to January. Cuba sends supplies mainly in the spring. Other countries supplying this market include Kenya, the Cameroons, Costa Rica and the Guinea countries.

It is interesting to note that although the Federal Republic and UK markets are very similar in some respects, their seasonality patterns are quite different. Both have very limited supplies arriving in the summer months, but imports into the Federal Republic are more evenly spread over the rest of the year than are those of the UK. This is especially noticeable in the month of January; in the UK there appears to be a reaction after Christmas and few pineapples are bought. The Federal Republic, on the other hand, normally imports twice as much in January as does the UK; there was an exception in 1969. It would seem that the pattern of purchasing pineapples in the Federal Republic of Germany and the UK is different; more people probably buy pineapples on a regular basis in the Federal Republic rather than, as in the UK, on impulse, particularly at festive seasons.

Distribution

The major proportion of pineapples imported into the Federal Republic of Germany now comes overland via France and is therefore handled by the major French importers, but imports from the Azores, Brazil etc., arrive at the ports of Hamburg and Bremen, while air-freighted fruit may be received at any of the ten international airports. Pineapples purchased directly from supplying countries are bought on a consignment/commission basis. Several importer/wholesalers situated in the major centres of population handle pineapples – it seems likely that consumption is highest in urban centres, although fresh pineapples are sold all over the Federal Republic.

Pineapples from the Azores and Kenya are chiefly sold to hotels and delicatessen stores. Sales of high-priced luxury fruit have not fallen despite the competition from cheap Ivory Coast pineapples which are sold mainly to supermarkets and in fact in 1969 and 1970 sales of luxury fruit were on the increase.

Prices

The average cif import values of pineapples imported in the Federal Republic of Germany over the last five years have been as follows:—

DM/kg	1966	1967	1968	1969	1970
All sources	1.43	1.58	1.33	1.42	1.31
Brazil	0.61	0.78	0.66	0.58	0.63
Ivory Coast	1.89	1.61	1.37	1.49	1.29
Martinique	1.70	1.55	1.35	1.53	1.35
Guinea	2.00	1.48	1.25	1.24	1.03
Azores	2.05	2.11	1.73	2.21	2.12
Kenya	2.99	2.92	2.89	2.18	1.95
Taiwan	3.83	3.75	4.10	3.17	3.54
Cuba	...	...	1.59	0.85	0.90
Costa Rica	...	...	...	0.73	0.80
Cameroon	...	...	1.62	1.62	1.14
... Not available					

Source:—Derived from *Official Trade Returns*

The average all source value of pineapples has fluctuated, although a slight downward trend may be discerned after the peak in 1967.

Fruit from Brazil fetches the lowest import price, equal to less than half the average. The low import prices for Brazilian, Cuban and Costa Rican pineapples undoubtedly reflect trade and consumer opinions regarding the acceptability of this fruit compared with competitive produce.

The average value of pineapples from the Ivory Coast and Martinique has declined over the 5 year period which suggests that the market is becoming increasingly competitive. Part of the decline in price in 1970 compared with 1969 may be attributable to the revaluation of the Deutschmark in 1969.

Until 1969 Kenyan pineapples were always more expensive than Azores fruit, but in 1969 and 1970 the positions were reversed and the Azores pineapple was the more expensive due mainly to the activities of one wholesaler. The prices of air-freighted fruit from Taiwan greatly exceed those from either the Azores or Kenya, largely because of the higher freight costs involved, although it should be remembered that supplies from this latter source are very insignificant.

One wholesaler contacted in late 1971^(a) quoted average wholesale prices for pineapples as follows:—

Ivory Coast	1.20	DM/kg
Kenya	2.80/3	DM/kg

The wholesale price quoted above for Ivory Coast fruit is lower than the calculated average import price for 1970. This suggests that prices may have fallen in the intervening period, on the other hand the firm concerned has a very large trade in produce of all sorts, specialises in servicing chains and supermarkets and may be operating on a low margin — the calculated import price is, of course, an average for all imports.

The Netherlands

Seasonality

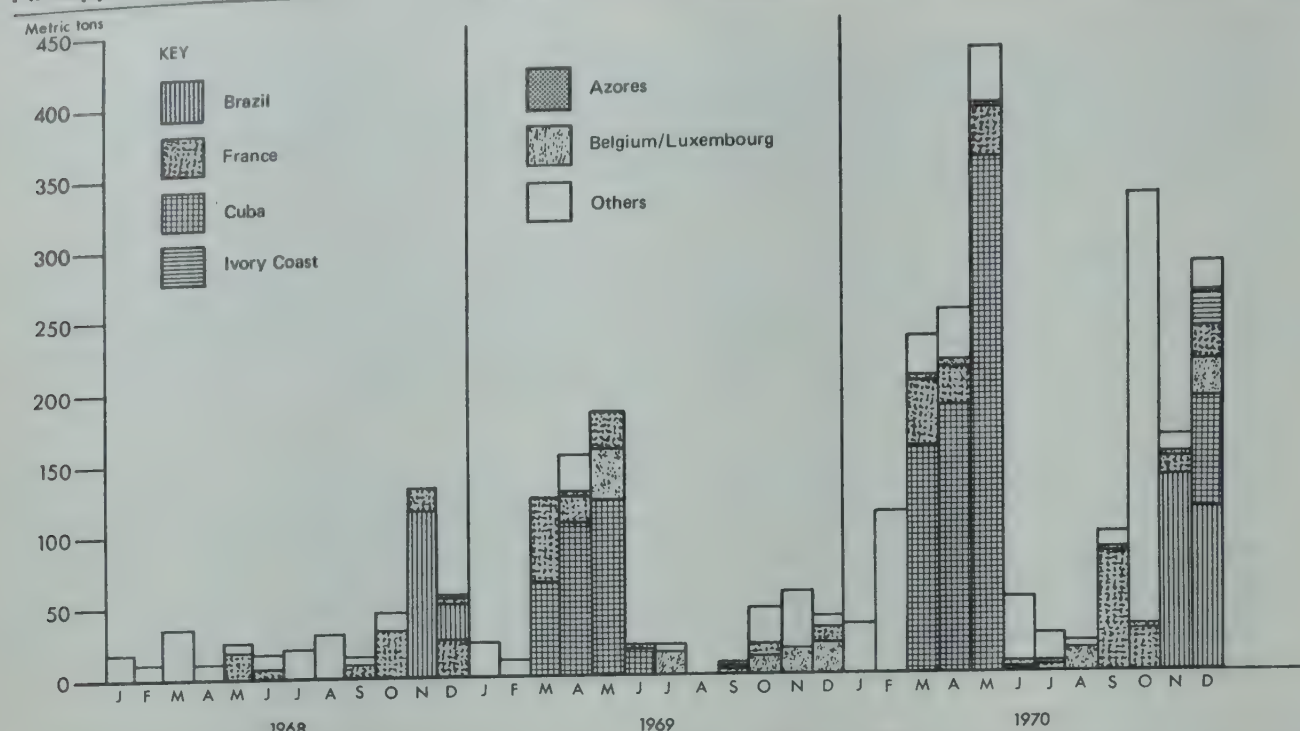
Unfortunately the Dutch monthly trade statistics do not show a very detailed breakdown by supplying countries and consequently much of the trade of 'other countries' is supplied by countries named individually in some months. For example only half of Brazil's total supplies in 1970 is shown in the monthly breakdown; the only countries whose aggregate monthly supplies equal the final annual total are France and Belgium.

The seasonal distribution histogram Fig (iv) shows gross and not net imports and therefore does not accurately reflect consumption patterns. The Netherlands differ from other European countries studied in that most of their imports came in May in 1970 and 1969 and in November in 1968. Very little is imported in the summer and in 1970 much more was imported in the months leading up to Christmas than previously.

For the past two years Cuba has been the major supplier of pineapples to the Netherlands, her supplies coming in the spring and in December. No one country supplies this market all the year round, but Belgium and France supply it from March onwards. Brazil supplies pineapples mainly in November and December.

(a) Private Communication. Harder, Meiser & Co

Figure (iv)
Pineapples Monthly imports into the Netherlands 1968-70



Source: Maandstatistiek van de Invoer Centraal Bureau voor de Statistiek

Distribution

In spite of the total trade in pineapples being relatively small in the Netherlands, the fruit is handled by most of the major importers; sales being virtually confined to the Rotterdam-Hague-Amsterdam triangle^(a).

Pineapples from Cuba and Brazil are sea-freighted to Rotterdam whereas those from France and Belgium come overland.

Prices

The average cif import values of pineapples over the last five years have been as follows:—

Gldrs/kg

	1966	1967	1968	1969	1970
All sources	1.24	1.06	0.92	0.80	0.66
Brazil	0.42	0.47	0.42	0.52	0.28
France	1.07	1.31	1.36	1.04	0.93
Azores	2.09	1.75	2.20	...	1.91
Kenya	...	2.00	2.37	...	...
Cuba	...	...	...	...	...
USA	...	...	...	0.23	0.60
Belgium/Luxembourg	...	0.90	...	...	0.78
Belgium/Luxembourg	2.37	2.25	1.46	1.07	1.32
Ivory Coast	...	...	...	2.11	1.16

... not available

Source:— Derived from *Official Trade Returns*

Average all source import prices have fallen steadily from 1.24 guilders in 1966 to 0.66 guilders in 1970; this is due mainly to the increased share of cheaper produce, notably from Cuba in 1969 and 1970 and Brazil in 1970.

(a) Visit made by TPI economists in 1968.

Brazilian pineapples again fetch the lowest import prices followed by Cuba and the USA. In 1970 the price for pineapples from Brazil practically halved and it is worth noting that prices for all the supplying countries have shown a great deal of fluctuation over the period.

There appear to be three markets for pineapples in the Netherlands; first a market for very cheap pineapples from Cuba and Brazil, second a luxury market supplied by the Azores and third a medium priced market supplied by France and Belgium.

Belgium/Luxembourg

Seasonality

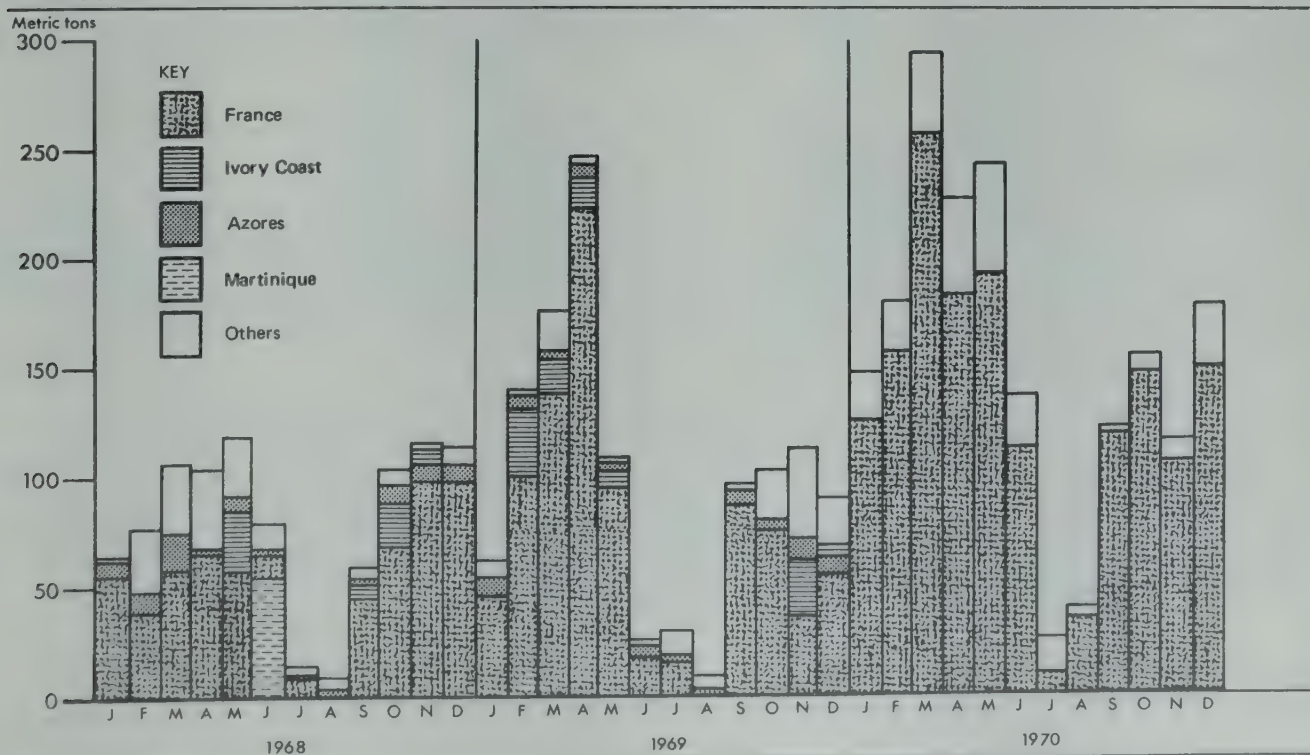
As shown in the seasonal distribution histogram Fig (v), most imports of fresh pineapples into Belgium arrive between September and June with a peak in the spring at Easter. France is the major supplier and, with the exception of August 1968 and 1969, supplied this market all the year round. Most French pineapples came at Easter time in 1969 and 1970, but in November and December, in 1968. The Azores supplied this market throughout 1968 and 1969 but the Ivory Coast had no regular pattern of supply in these two years. It should be noted that in 1968 only half of the Ivory Coast's exports are shown; the rest appears under 'other countries'. Martinique also supplied this market in 1968.

Distribution

There are several importers of pineapples in Belgium, chiefly in the Brussels area, and supplies are also obtained from the Paris market. A firm in Brussels has the sole agency for Azores pineapples.

This fruit is widely known throughout the country and is sold by small independent retailers in Brussels, as well as by supermarkets and luxury retailers throughout the country (although the latter are the only outlets for luxury fruit).

Figure (v)
Pineapples Monthly imports into Belgium/Luxembourg 1968-70



Source: Commerce Extérieur L'Institut National de Statistique

Prices

Average cif import values of fresh pineapples for the past five years were as follows:—

B Fr/kg

	1966	1967	1968	1969	1970
All sources	24	21	18	18	16
France	23	19	17	17	15
Azores	27	21	28	28	...
Ivory Coast	...	...	14	18	...
Martinique	...	...	16	...	...

... Not available

Source: Derived from *Official Trade Returns*

All source import prices have declined by 8 francs over the period. Prices for French pineapples are just below the average and also fell 8 francs. Prices for pineapples from the Azores were high in 1966, dropped in 1967 and rose again in 1968 and 1969 to slightly above the 1966 level. The probable reason for the fall in prices is that the expansion in Belgium's market has been with less select grades of fruit to stimulate more widespread consumption; formerly she used to take mainly very select grades for a small but very discriminating section of the public.

Retail and wholesale prices are highest for Azores pineapples and there is a greater range in retail prices than in wholesale prices. Pineapples are very often sold by the piece rather than by weight, especially the smaller fruit sold through super-markets.

Italy

Seasonality

As shown by the seasonal distribution histogram Fig (vi) while the Italian Trade Returns do show monthly imports of pineapples the breakdown is not at all comprehensive. The only country shown in detail is the Ivory Coast. There is a marked peak in imports in December and another at Easter, i.e. the festive seasons, whereas there is a definite low in the summer months with little or nothing being imported. As the Ivory Coast is the main supplier, the pattern of her supplies is virtually identical with the overall pattern. Other countries which supply this market include France, the Azores, Taiwan, Indonesia, Guinea, Kenya and Martinique.

Distribution

As in the case of France, importers of pineapples are usually importers of bananas also. However, the trade in pineapples is concentrated in the hands of three importers, the chief among them, who operates from Genoa⁸, is the sole agent for Ivory Coast pineapples.

Pineapples are sold on the main wholesale markets; the most important of which is probably Milan. As regards retail sales, the pineapple is well known in most large towns and is widely sold by greengrocers and even in street markets. Nevertheless sales are chiefly confined to the north of Italy where the large urban centres are concentrated.

Prices

The average cif import values of pineapples imported into Italy during the last five years were as follows:—

Lira/kg

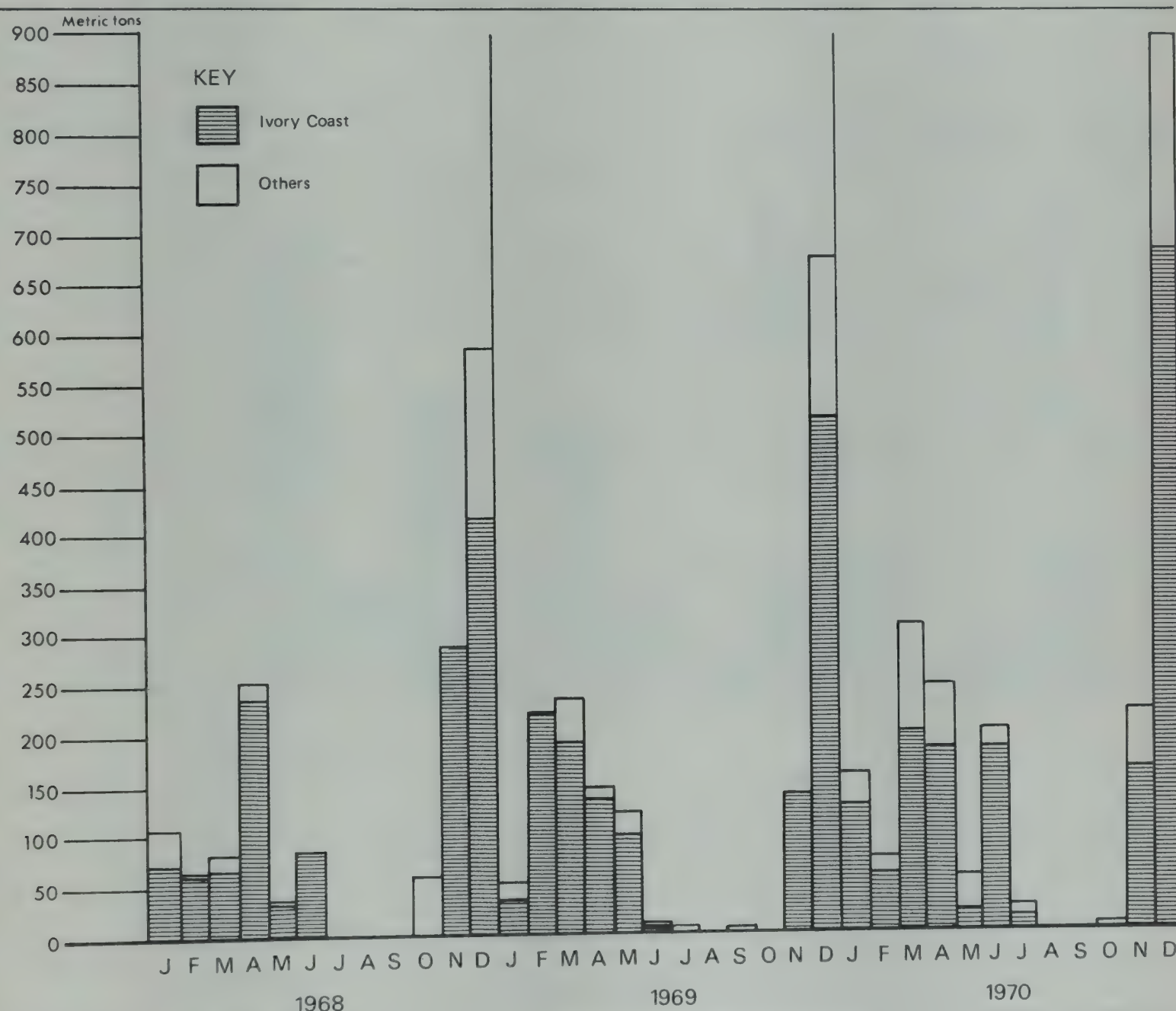
	1966	1967	1968	1969	1970
All sources	230	217	221	231	284
Ivory Coast	223	224	217	229	288
France	277	243	256	250	...
Martinique	...	...	253	245	...
Guinea	290	200	188	185	...
Portugal	257	270	234	234	...

... not available

Source:—Derived from *Official Trade Returns*

Figure (vi)

Pineapples Monthly imports into Italy 1968-70



Source: Commercio con l'Estero Istituto Centrale di Statistica

All source import prices were fairly steady until 1970 when they rose at a time when imports of fresh pineapples as a whole were increasing. Prices for pineapples from the Ivory Coast, setting the trend, rose in 1970. Prices for French, Martinique and Azores pineapples remained above the average throughout this period. It is interesting to note that import prices for fruit from the Azores were lower in 1968 and 1969 than prices for French and Martinique pineapples; this would seem to suggest either the importation of lower grades of fruit or the fact that the luxury market is not very distinct in Italy. Prices for pineapples from

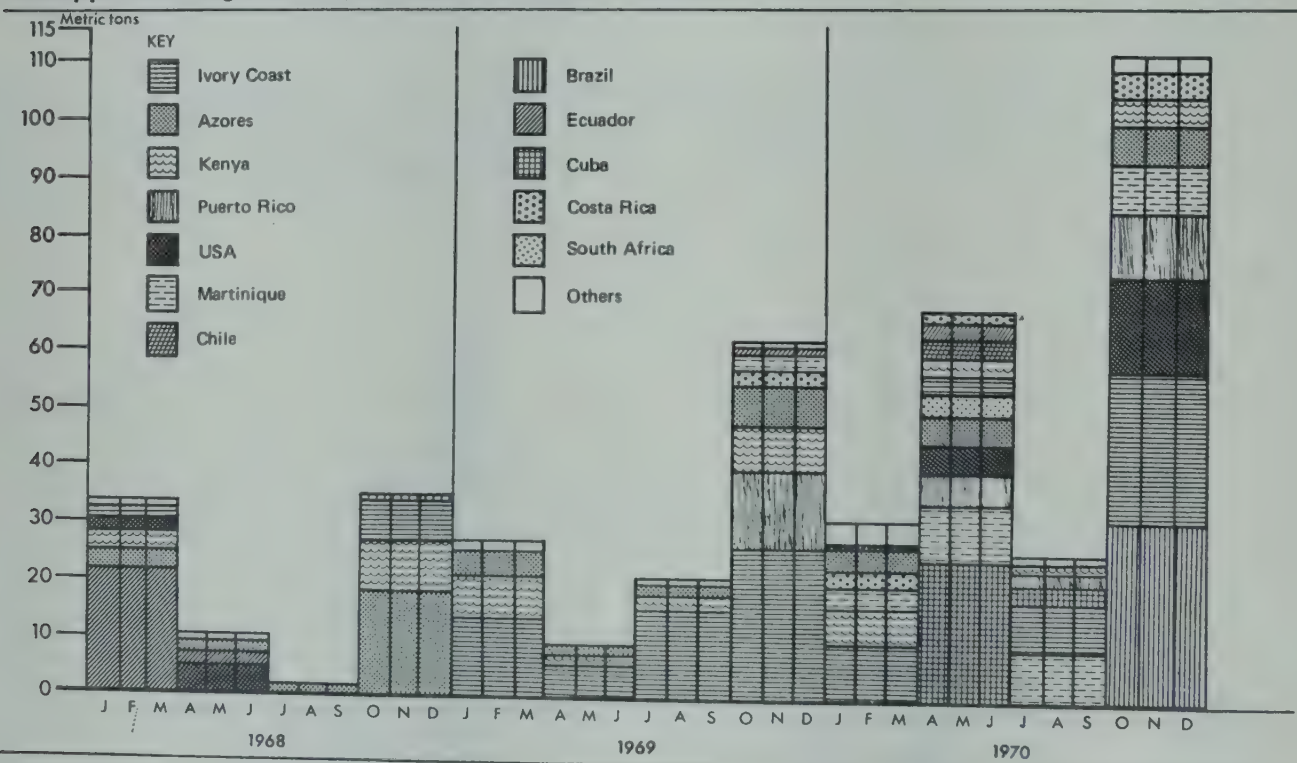
Guinea have dropped by over 100 lira and from being the most expensive in 1966, they were, in 1969, the cheapest source of fresh pineapples. In November 1971, average wholesale prices for pineapples ranged from 330 – 385 lira per net kilogramme^(a).

Sweden

Seasonality

Owing to the nature of the Swedish Trade Returns the seasonal distribution histogram Fig (vii) shows a quarterly, not monthly, breakdown. Pineapples come into Sweden mainly in the last quarter. The Azores supply this market with luxury fruit in every quarter. The Ivory Coast and Kenya have peaks in December. Other supplies to this market fluctuate and come mainly from the following countries:— Brazil, Cuba, Ecuador, Martinique, Puerto Rico and the USA.

Figure (vii)
Pineapples Average monthly imports into Sweden 1968-70



Source: Utrikeshandel, Statistiska Centralbyrån

Distribution

In the mid 1960's almost all Sweden's imports of pineapples were for the luxury market. From 1966 to 1970 the proportions of fruit going to the luxury market were as follows:— 97, 56, 47, 29 and 13 per cent, there was an actual decline in the size of this market in 1969 and again in 1970.

In Sweden the trade is characterised by the high proportion of fruit which goes to the retail chains and by the fact that some retail groups also act as importers. The independent retailer plays a relatively minor role in the distribution of fruit.

Supplies received from the Ivory Coast in recent years have been transported via Hamburg to Halsingborg, while sea-freighted supplies coming directly from the Azores and Ecuador are received at Gothenburg. Considerable problems are

(a) Private communication. Italian Institute for Foreign Trade

encountered in Sweden in the distribution of fresh fruit, often over very long distances. The Stockholm market is almost certainly the most important for pineapples^(a).

Prices

Average cif import values for the last five years were as follows:—

<i>Kr/kg</i>	1966	1967	1968	1969	1970
All sources	3.79	2.93	2.25	2.74	2.09
Azores	3.34	3.29	2.57	3.68	3.07
Ivory Coast	...	2.61	2.85	2.62	2.65
Kenya	4.46	4.13	3.19	3.54	3.66
Brazil	...	2.30	...	...	0.79
Cuba	...	...	...	...	1.50
Ecuador	...	1.52	1.02	2.00	2.00
Martinique	...	...	...	3.12	2.85
Puerto Rico	...	...	...	1.38	1.76
USA	5.16	...	2.33	...	1.52

... not available

Source:—Derived from *Official Trade Returns*

There has been quite a large fall in average all source prices from 3.75 kroner in 1966 to 2 kroner in 1970. The large fall in average all source prices can again be attributed to the switch from pineapples for the luxury market to pineapples intended more for the whole population rather than one particular sector.

Import prices for pineapples from the Ivory Coast have remained fairly level whereas Brazilian pineapples have fallen in price and those from Ecuador and Puerto Rico have risen in price. Prices for Azores' pineapples have fluctuated greatly over the period but those for the USA's and Kenyan fruit have fallen.

Retail prices in Sweden are liable to be higher than elsewhere, partly because of the high cost of transporting pineapples to Sweden, and partly because of the high costs of distributing these pineapples within the country.

Switzerland

Seasonality

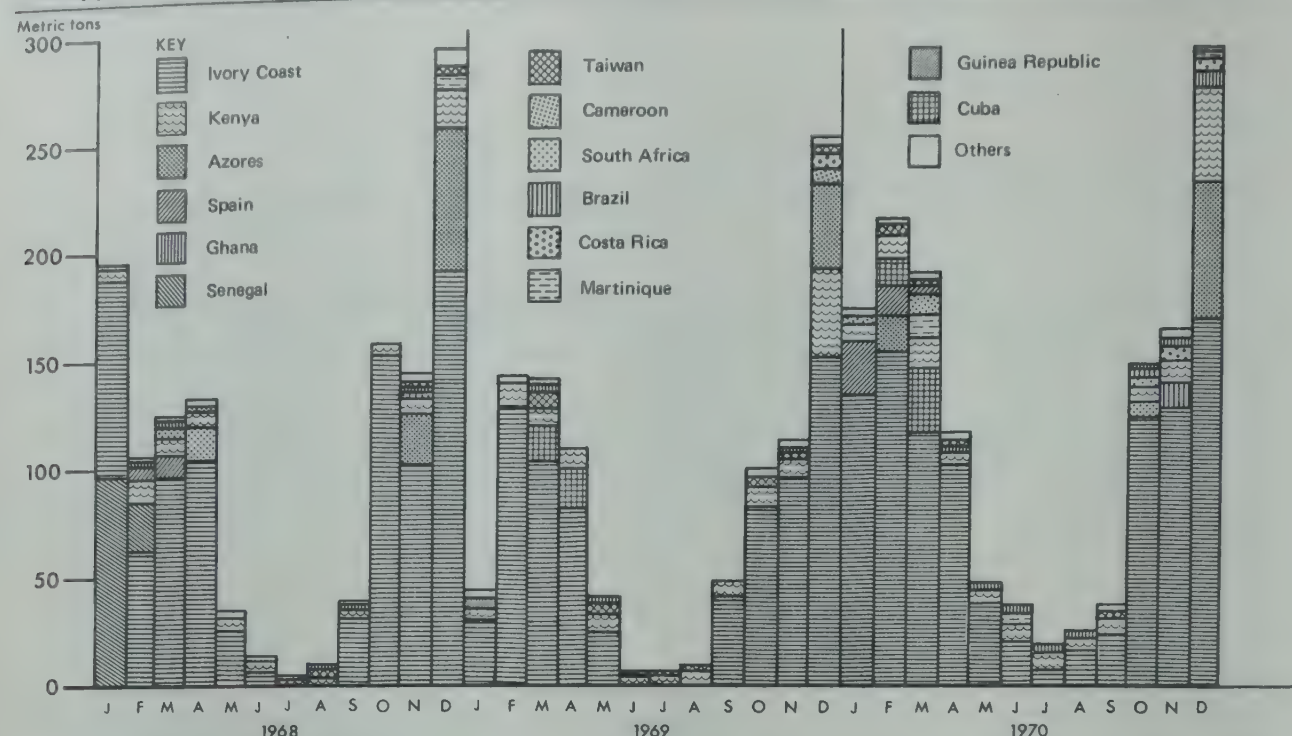
The seasonal distribution histogram Fig (viii) shows that imports of fresh pineapples into Switzerland occur mainly between October and April with a December peak. Imports during the remainder of the year are relatively low, although occurring in every month. Kenya is the only country which supplied pineapples in every month of the three years shown, though the Ivory Coast came near to doing so, missing only July and August in 1968 and 1969. Other countries which supply this market sporadically include the Azores, Ghana, Cuba, Taiwan, the Cameroons and Senegal.

Distribution

There are several importers of pineapples in the five main urban centres of Switzerland, besides a large co-operative marketing organisation which imports direct. Pineapples from the Ivory Coast are received in Geneva after coming by rail from Marseilles. The fruit is well known throughout the country, despite the problems of distribution during the winter.

(a) Previous TPI study — unpublished

Figure (viii)
Pineapples Monthly imports into Switzerland 1968-70



Source: Statistique de la Suisse. Bureau Federal de Statistique.

Prices

Average cif import values of pineapples are shown below for 1968-1970 only, as no detailed statistics exist before this period.

	Fr/kg		
	1968	1969	1970
All sources	1.81	1.99	1.69
Ivory Coast	1.70	1.81	1.59
Azores	1.69	1.32	1.54
Kenya	3.09	2.91	2.66
Cameroons	1.79	1.96	1.62
Ghana	1.21	1.22	1.89
Taiwan	4.48	4.49	4.26
Senegal	1.54	...	...

... not available

Source: Derived from *Official Trade Returns*

It is interesting to note that for these three years, the price for Azores pineapples was less than that for Ivory Coast pineapples, whereas in every other country the opposite is true. This implies that the major proportion of pineapples sold on the Swiss market are of relatively high quality. Prices for Kenyan and Taiwan pineapples are very high.

The market for luxury pineapples in Switzerland is relatively large, in the last three years, 1968–1970, it accounted for 15, 19 and 16 per cent of the total. This market, together with the Federal Republic of Germany's market has increased in size and managed to keep its share of total imports.

Inter-country comparison of prices

So far all the price data presented in this report for importing countries have, for reasons given in the note at the beginning of the report, been in national currencies. This has, of course, precluded inter-country price level comparisons. However, since exporters would no doubt wish to supply the more remunerative markets if

such exist, Table 7 has been prepared to show annual average import prices on a standardised basis for 1970 for the main suppliers to each of the eight European importing countries; the standard price unit used is Sterling — new pence per kg. It is fortunate that the major parity changes had occurred before this year.

Two aspects may be discussed on the basis of the data in Table 7 — first, the division of suppliers into high and lower value groups and, second, the comparative price levels in the various European countries. It should, however, be borne in mind that average import prices may not in fact be very good indicators of price levels for goods imported on consignment if adjustments, following final sale, to importers' initial estimates are not fully provided for or taken into account in the final rendering of Trade Returns; however, in the absence of comprehensive whole-sale price data average import prices are the best data available.

On the first aspect — division of suppliers into high and lower value groups — it can be seen from Table 7 that, with two exceptions, produce from the Azores and Kenya is much higher priced than any other within each country. This fruit is usually at least twice the price of the cheaper fruit — depending on the importing country and source of supply and this merely confirms what has been noted in the commentary on individual markets i.e. that this is high quality fruit for the luxury market. The first exception is for the Swiss market value for Azores' fruit which is atypically low — it would appear that the Azores has no advantage over the Ivory Coast as regards freshness of her fruit in supplying this market; the second exception is the price of Ivory Coast produce on the Swedish market. This high price could either be because the fruit is of a particularly good quality, plus high transport costs, or because it might have been air-freighted into Sweden, although no definite information has been received on the latter possibility.

Within the group of lower value suppliers there is a division on the one hand between Cuba and, on the other, between the remaining countries. In every country prices for Cuban produce are lowest — this could be a commentary on the acceptability of the type (Red Spanish) and/or quality and presentation, or indeed Cuban trading policies (e.g. a need to earn hard currencies).

The second aspect — comparative price levels on the various importing countries is probably the more important for potential exporters; is there in fact any advantage to be gained in terms of fob or producer returns in some countries compared with others? Prices in Sweden are invariably higher than elsewhere but this is attributed to the higher transport costs. Indeed, in general prices seem to fall into the sort of pattern to be anticipated bearing in mind probable transport differentials in relation to the geographical position of supplier and importer; for example, Azores' pineapples are cheaper in France than all other countries (except Switzerland and comment has already been made on this), Ivory Coast fruit is dearer in Switzerland and Sweden than elsewhere, etc. There are some anomalies apart from those already mentioned, e.g. the relatively low price for Kenyan pineapples in the Federal Republic of Germany — this is attributed to efforts to develop this market starting in earnest in 1967–68 and probably an associated willingness to be satisfied with slender margins.

Although other anomalies exist it is probably not very rewarding to comment in detail on these, particularly in the absence of detailed information on transportation routes and costs, other marketing costs and the rather inexact indication of market price levels which the annual average import prices give. However, the impression remains that, taking into account likely transport differentials, no market would provide significantly better or worse fob returns than the others.

Prospects

Demand in each of the eight European countries has been projected statistically, the work being carried out by Mr. R. Pope in TPI's Statistics Section. Two series of projections — giving in effect a lower and upper limit for the aggregate total and for countries where the two projections are fairly wide apart — were made and the results obtained for 1975 are set out in Table 8, together with observed data for 1970. A brief description of the methodology used, assumptions made etc. follows; further information on these aspects can be provided on request.

In the first projection — projection (a) in Table 8 — consumption for each country in each year from 1961 to 1970 was expressed in grams *per capita* (see Appendix C) using net import figures and estimates of mid-year population from the *Demographic Year Book United Nations*. No formal test is required to show that in each case the trend of consumption is strongly upward.

Because of the obvious similarities in the patterns of growth in different countries, as a first step the combined net imports and populations were used to derive *per capita* figures for the whole group. From these it appeared that after a period of little change, there was a strong upsurge from about 1967. It is a matter of experience that such an upsurge does not continue without limit, and the model chosen for projection was a sigmoid curve. This required the assumption of a limit, which was set at 300 grams *per capita*, which is unlikely to be exceeded for the group in the foreseeable future, although individual countries could have considerably higher *per capita* consumption. The position of the limit is not critical, and if it had been set, for instance, at 400 grams *per capita*, the resulting estimates up to 1975 would be only very slightly affected.

No corrections have been made for changes in price or availability of fresh pineapple during the periods chosen for either projection. Similarly, projections of population were made using the criterion of a fixed percentage change from year to year, in accordance with mid-year estimates from 1961 to 1970, extended to 1975.

It was found that the projection to 1972 resulted in an estimated *per capita* consumption marginally less than half of the assumed limit. Similar curves were then fitted to the *per capita* figures for individual countries, the limit for each being chosen so that the resulting estimate for 1972 was slightly less than half that limit. This method gave aggregate estimated imports in 1975, for the eight countries, as 52 185 tons — projection (a), Table 8 — compared with observed imports of 35 991 tons in 1970.

However, the observed, i.e. actual, *per capita* consumption figures for 1970 in some countries, notably the UK and the Federal Republic of Germany, were considerably higher than the calculated figures obtained for this year by the analysis employed. This was due to using the years 1961 to 1970 as the base period, since in the early 1960's imports into some countries declined and the inclusion of these years automatically reduced projected *per capita* consumption for later years in

Table 8

Observed total and *per capita* consumption in 1970 with projections to 1975 in eight European countries

COUNTRY	1970 Observed		1975 Projected (a)		1975 Projected (b)	
	Total m tons	<i>Per capita</i> grams	Total m tons	<i>Per capita</i> grams	Total m tons	<i>Per capita</i> grams
France	15 348	302.2	24 872	470.3	24 460	462.5
United Kingdom	7 326	131.5	8 501	149.1	11 198	196.4
Federal Republic of Germany	6 280	105.4	5 640	90.4	9 596	153.8
Italy	2 202	41.0	4 647	83.2	4 071	72.9
Switzerland	1 447	230.4	2 875	433.3	2 922	440.4
Belgium/Luxembourg	1 862	185.8	3 440	335.6	4 224	412.1
Netherlands	828	63.6	1 174	85.1	1 523	110.4
Sweden	698	86.8	1 036	123.9	1 430	171.1
TOTAL	35 991	140.0	52 185	195.3	59 424	222.4

(a) Using 1961 to 1970 as the base period

(b) Using 1964 to 1970 as the base period

those countries concerned. In addition, the recent massive increases recorded by several countries were accorded less weight in the first analysis owing to the use of a ten year base period.

To give more weight to these recent increases, which it was felt were not out-of-line (preliminary data for 1971 show this assumption to be correct), a further projection was made using only the years 1964 to 1970 as the base period — projection (b), Table 8. The combined estimate predicted that in 1972 consumption in the eight countries taken together would be almost 55 per cent of the assumed limit of 300 grams *per capita*, and limits for the individual countries were so chosen that this percentage would almost be reached in 1972 in each case. This projection resulted in an aggregate figure for imports into the eight European countries in 1975 of 59 424 tons compared with the lower level — projection (a) — of 52 185 tons and actual imports of 35 991 tons in 1970. More realistic projections for 1975 were obtained both for the UK and the Federal Republic of Germany although those for France and Italy fell slightly by comparison with the figures obtained in projection (a).

The next section deals with Europe in more detail. In it are discussed the justification for eliminating the years 1961 to 1963 from the base period for the second projection, the underlying stimuli which promoted the massive increase in imports in 1970 — particular attention being paid to the UK and the Federal Republic of Germany where the increases were so striking and, as a consequence of these stimuli, which of the two projections is the better indicator of future demand. Later sections deal with market prospects in other major markets where, however, future demand has not been projected statistically; prospects for potential new supplies; the future of the luxury market and general points affecting demand for fresh pineapples.

Europe

By 1975 aggregate demand for the eight European countries is predicted to increase by not less than 16 194 tons over 1970 — projection (a), i.e. 45 per cent in five years, and not more than 23 433 tons — projection (b), 65 per cent in five years. Ninety-three per cent of the difference between these figures is attributable to the more optimistic projections for the UK and the Federal Republic of Germany in the second series. It is felt that underlying market factors (discussed in detail below) were only just beginning to have their full effect at the end of the period under review and that their continued influence will result in demand in these two countries in 1975, and therefore aggregate demand for the eight European countries, being much nearer the level of the second projection (in most cases the higher of the two) than that of the first.

The justification for eliminating the years 1961 to 1963 in making projection (b) is that changes occurred in this trade whose effects became manifest in the mid-1960's; these changes included better supply and marketing organisation by some suppliers, e.g. the Ivory Coast and the Republic of South Africa, improvement in quality and transportation and increased interest and activity by importers, wholesalers and retailers.

The United Kingdom

From Table 8 it can be seen that imports into the UK are expected to reach at least 8 501 tons by 1975 — projection (a) — and could be as much as 11 198 tons — projection (b). Underlying market factors which suggest that demand will be considerably nearer the higher than lower figure are:—

- i. Only very recently have supermarket chains taken much interest in this fruit; part of the very considerable increase in imports in 1970 is attributable to this interest;
- ii. while supermarket's interest in produce is relatively recent it has stimulated changes in the traditional pattern of produce trading. Initially, supermarket buyers bought on the wholesale markets like any other retail outlet but they quickly moved to establishing specifications and ordering against these in advance and finally to direct buying, from overseas suppliers in some instances, though direct buying is of minimal importance with regard to imported produce. A number of traditional import/wholesale firms have reacted to this change by adapting to supermarkets' requirements and/or by paying special attention to exotics; both changes will tend to enhance the prospects for pineapples;
- iii. though the supermarkets' interest in pineapples may be expected to depress sales by traditional fruiterers/greengrocers, aggregate national sales may be expected to increase owing to the intensive sales methods employed by supermarkets and their usual assessment of worthwhile lines, i.e. sales per square foot.

Another aspect of the UK's market which can be conveniently discussed here is the possible effect of her entry into the EEC. By January 1978, five years after entry, she will adopt fully the EEC common external tariff, achieving this by five equal steps over the transitional period. In 1978, therefore, countries now enjoying Commonwealth preference (duty-free entry compared with 10 per cent) will lose this and pay the EEC tariff (now 9 per cent) unless they can negotiate associate status with the EEC. On present trading patterns the countries most affected are the Republic of South Africa as the current main supplier and the Ivory Coast as a large supplier to the EEC enjoying duty-free entry to that group. While it is not possible to predict the outcome, it seems that there will inevitably be some shift from South African to Ivory Coast fruit, if the latter's production is adequate. Kenya, the main supplier of luxury fruit, already has, together with Tanzania and Uganda, tariff free entry into the EEC but the gradual removal of Commonwealth preference could adversely affect her competitive position in the UK vis-a-vis other suppliers.

The Federal Republic of Germany

Imports into the Federal Republic of Germany have followed a very similar pattern to those into the UK, though the reasons are probably somewhat different. Supermarkets have, at any rate over the last two decades, had a higher proportion of sales of produce in the Federal Republic than in the UK so there have been fewer independent outlets to initiate the trade in new fruits. In general supermarkets do not launch new products until they are reasonably satisfied that sales potential is good and it is possible that more supermarkets came to this decision towards the end of the 1960's, which would account for the marked increase in imports in 1970.

In addition, although *per capita* consumption of fruit in general is much higher in the Federal Republic of Germany than in the UK, she has usually been slower than the UK (and France) in developing her market for exotic fruits; this is so, for example, for avocados and mangoes. This is attributed to the fact that fewer Germans than Englishmen and Frenchmen formerly had first-hand knowledge of these fruits in the countries of production because of the difference in colonial records. The situation is now changing, since first-hand overseas knowledge is derived from holidaying or business visits overseas in which respect Germans are at least as well, if not better, represented.

Bearing in mind these factors, it is possible that the much increased imports in 1970 herald the start of a new trade demand pattern and were not out-of-line as the first statistical projection assumed; in fact this projection gave a figure for 1975 — 5 640 tons — which was lower than actual imports in 1970. It is therefore considered that the second projection — 9 596 tons in 1975 — is a much more realistic indicator of demand in that year.

Other European countries

It is not proposed to discuss the other six countries individually in any detail since there are no known market factors which can be discussed to determine which of the two predictions is the better indicator. In any case, in none of the countries is the absolute difference in the two projections, whether up or down, sufficiently large to have a marked influence on the aggregate total of imports into Europe in 1975; moreover in only one country — Sweden — is the percentage difference between the two projections larger than those for the UK and the Federal Republic of Germany.

These six countries fall into two groups on the basis of *per capita* consumption with France, Belgium and Switzerland having high rates and the Netherlands, Italy and Sweden having low rates.

France is the major European market, but the difference in the two projections for this country is marginal, so the level predicted for 1975 — approximately 24 500 tons — can be viewed with confidence. The other countries are all relatively small markets in terms of volume of imports and with the exception of Italy also have relatively small populations. The main possibilities for unpredicted growth, due to underlying market factors not known, lie with Italy, the Netherlands and Sweden which all have low rates of consumption. Even much increased levels of consumption in the last two named would have relatively little effect on aggregate European imports; however, if there was a marked increase in *per capita* consumption in Italy this would have a marked influence on total European imports, though this eventuality is thought unlikely owing to the abundance of other fresh fruits in Italy and the fact that a large part of the population, in the rural and poorer areas, cannot be regarded as potential consumers in the immediate future.

Since the second series of projections uses data from a period when significant changes in the trade had probably been reflected in trade flows these data are regarded as reasonable indicators of demand in 1975.

The United States

Unfortunately no projections could be made for this market as imports were not shown separately after the end of 1964. Up to that point imports had been declining, although *per capita* consumption over the last fifteen years had remained relatively steady, at about 225 grams *per annum**. Clearly in order to maintain *per capita* consumption levels in face of declining imports and increasing population, domestic supplies (including Puerto Rican and Hawaiian) have been increasing.

* Private communication. United States Embassy, Agriculture Section.

Export figures are in fact available for shipments from Hawaii¹ but unfortunately no distinction is made between supplies to the US mainland and to foreign countries. Out-shipments of fresh pineapple from Hawaii rose from only 7 559 tons in 1961 to a peak of 23 191 tons in 1966, before falling to 15 966 tons in 1968. By 1970 26 720 tons of fresh pineapples were being shipped, mainly to the USA. The increase in supplies in the first half of the period coincided with the reduction in imports into the USA from Mexico and the cessation of trade with Cuba.

In view of the long history of static annual *per capita* consumption rates a sudden change in this pattern is highly unlikely and this, together with the increasing dependence on domestic supplies, suggests that the prospects for new overseas suppliers are very poor; in fact it is only possible to accord Caribbean suppliers any hope since their transport costs may not be prohibitive but even they would face tariff barriers.

Canada

Canada's imports over the last decade have fluctuated year by year and there is no underlying trend so attempted statistical projections proved worthless; in fact imports in the 1960's were still below the level of the 1950's. Problems of transportation to Canada and then over such a large country, particularly in winter, make the fruit expensive and this no doubt severely restricts demand. No growth potential is foreseen and market prospects for new suppliers are consequently assessed as most unpromising, and limited even then, to suppliers in the Caribbean.

Argentina

This market also shows no sign of expansion and because of its geographical position and the tariff situation is unlikely to import from any but its present suppliers.

Japan

In Japan, imports rose rapidly between 1961 and 1966 but then remained constant until 1969. Between 1966 and 1969 consumption per head was approximately equal to that in the USA, but in 1970 it rose by about 50 per cent to 347 grams. For this country any forecast, even for one year, could be substantially in error, although it appears certain from the evidence of provisional import figures for the first nine months of 1971, which exceeded those of the corresponding period in 1970, that there will be further significant increases.

Japan is ideally situated for many south-east Asian countries to supply and even the more distant of them might be able to penetrate the market because of the high prices prevailing.

Prospects for potential new suppliers

Potential new suppliers will be able to compete in European markets provided they can attain the standards called for and supply the fruit at a competitive price. Moreover their prospects are better than with some other commodities since this is a market which is expanding. However, they will have to study carefully the characteristics of each market, taking into account prices, tariffs etc. and also study freight costs, transportation facilities, packing and production costs etc. These remarks apply to both the luxury and non-luxury markets except for the comment with regard to growth potential which does not apply to the former.

Comments regarding potential new suppliers' prospects in non-European markets have been made under the appropriate countries.

The Luxury Market

These comments concern European markets only, since, with the possible exception of Japan, this type of market has not been identified elsewhere.

The prospects for the luxury market do not appear to be very bright. As can be seen from Table 4, most luxury markets have reached a peak but, except in the Federal Republic of Germany and Switzerland, have not maintained their share of the whole.

Over the decade there has been quite a change within the luxury market. Sea-freighted supplies from the Azores used to be the mainstay of this market, but recently air-freighted supplies from Kenya and elsewhere have become more important. It is said by members of the trade that Kenyan pineapples are more reliable in supply and are of a better quality than the Azores fruit. Demand for this luxury type of fruit is unlikely to increase greatly because it is used largely for formal entertaining purposes and its price precludes it from wider use.

General

Ultimately the demand for pineapples will depend on the price and quality of the fruit, people's incomes and tastes and competition from other fruits. It seems that the fresh pineapple will always remain somewhat of a luxury fruit; it compares unfavourably in price with other fruits e.g. apples, oranges and bananas and has poor keeping qualities. It is a fruit unsuited to eating out-of-hand and has to be used at sit-down meals. The size of the fruit means that more than one person is needed to eat it and it is more troublesome than, say a melon, to keep once cut. The fresh pineapple also has to compete with the canned variety which is quite cheap and easy to use.

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Appendix A

IMPORTERS OF FRESH PINEAPPLES

Note: The following list gives the names of some of the firms which are known to the Tropical Products Institute to be trading in this commodity, but the list should not be regarded as exhaustive. Inclusion in the list does not imply that TPI has any knowledge of the financial standing of the firms.

United Kingdom

Broome and Green (London) Ltd
James Street
Covent Garden
London WC2

Fyffes Group Ltd
15 Stratton Street
London W1

R. E. Jenkinson Ltd
35 King Street
Covent Garden
London WC2

T. J. Poupart Ltd
107–115 Long Acre
Covent Garden
London WC2

J. O. Sims Ltd
Winchester Walk
Borough Market
London SE1

Dan Wuille & Co Ltd
100–104 Long Acre
Covent Garden
London WC2

France

Ets E. Azoulay et Cie
2 Rue des Tropiques
MIN
94–Rungis

Albert Nataf
52 Cours Julian
Marseilles 2

Société Pomona
36 Rue d'Angers
MIN de Paris—Rungis
94—Rungis

Ets S. Tedesco et Cie
170 Cours Charlemagne
Lyons 2

**Federal Republic of
Germany**

Harder, Meiser & Co
29 Breitenweg
28 Bremen 1

T. Port
Kontorhaus Grossmarkt
2 Hamburg

Netherlands

Algemeene Vruchten Import Maatschappij NV
53 Walenburgerweg
Rotterdam 4

Ceka NV
437 Hoofdweg
Amsterdam

Jan de Geus NV
Central Market Hal 9—13
Amsterdam

Kooy Rotterdam NV
6 Westblaak
Rotterdam

Velleman en Tas NV
Fruit Exchange
Rotterdam

Belgium

Agrofruit Company (Belgium)
167 Italiëlei
Antwerp

John van Haecht
11 rue R. Lauwers
Hoeilaart
Brussels

Sweden

ASK Centrallen AB
12 Rannarbanan
Helsingborg

ICA Fukt och Gronsaker AB
5 Faktmastaregatan
Helsingborg

Kooperativa Forbundet
Fack
s—104 65
Stockholm 15

Moller & Co AB
23–25 Importörvagen
s–121 73 Johanneshov
Stockholm

S. J. Norman AB
5 Styrmansgaten
Stockholm

Switzerland

J. Berri
67 Sihlquai
8005 Zurich

L. G. Pelli
55 Konradstrasse
Zurich 5

Tremblay and Burgermeister SA
49 Route des Jeunes
Geneva 26

Sante Tribo
72 Konradstrasse
8031 Zurich

Appendix B

TRADE STATISTICS

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Appendix B: Table 1a
Fresh Pineapples (Abacaxis): Exports from Brazil

	1961	1962	1963	1964	1965	1966	1967	1968	1969
TOTAL	23 737 Metric Tons £'000	17 048 183.8	10 158 66.7	14 524 308.1	20 629 700.0	21 551 665.9	18 987 500.7	22 138 660.9	21 781 967.3
of which to:— Belgium/Luxembourg	70 Metric Tons £'000	— —	— —	— —	— —	— —	— —	— —	— —
Fed. Republic of Germany	3 895 Metric Tons £'000	2 249 42.1	624 6.6	1 615 29.7	1 826 61.0	400 8.6	400 10.7	820 26.9	50 2.1
Netherlands	17 Metric Tons £'000	271 4.0	— —	— —	— —	— —	349 9.4	95 4.0	50 2.1
Spain	— Metric Tons £'000	— —	— —	— —	— —	— —	20 0.6	— —	— —
Sweden	4 Metric Tons £'000	4 0.1	— —	— —	— —	— —	— —	— —	— —
United Kingdom	17 Metric Tons £'000	2 0.3	— —	— —	1 —	4 0.2	— —	— —	— —
Argentina	19 687 Metric Tons £'000	14 203 130.1	9 463 56.9	12 832 276.4	18 798 638.7	21 147 657.1	18 218 479.9	21 222 629.9	21 681 963.1
Uruguay	47 Metric Tons £'000	49 2.0	65 3.2	75 1.8	4 —	— —	— —	— —	— —
United States	— Metric Tons £'000	270 5.5	2 —	— —	— —	— —	— —	— —	— —
Other countries	— Metric Tons £'000	— —	4 —	2 0.2	— 0.3	— —	— 0.1	1 0.1	— —

— Nil or negligible

Source:— *Comercio Exterior do Brazil Serviço de Estatística Econômica e Financeira*

Appendix B: Table 1b
Fresh Pineapples (other varieties): Exports from Brazil

		1961	1962	1963	1964	1965	1966
TOTAL	Metric Tons £'000	269 1.9	89 0.9	— —	— —	1 107 52.5	42 1.6
Of which to:—							
Fed. Rep. Germany	Metric Tons £'000	— —	— —	— —	— —	— —	— —
Argentina	Metric Tons £'000	262 1.8	32 0.2	— —	— —	1 107 52.5	42 1.6
Uruguay	Metric Tons £'000	7 0.1	56 0.7	— —	— —	— —	— —
Other countries	Metric Tons £'000	— —	1 —	— —	— —	— —	— —

— Nil or negligible

Information not shown after 1966

Source:— *Comercio Exterior do Brazil Servico de Estadistica Economica e Financeira*

Appendix B: Table 2
Fresh Pineapples: Exports from Mexico

	1961	1962	1963	1964	1965	1966	1967	1968	1969
TOTAL	19 650 Metric Tons £'000	25 327 Metric Tons £'000	31 759 Metric Tons £'000	20 561 Metric Tons £'000	19 476 Metric Tons £'000	14 878 Metric Tons £'000	10 520 Metric Tons £'000	8 706 Metric Tons £'000	11 671 Metric Tons £'000
of which to:—	168.4	281.9	370.7	262.4	241.9	186.7	108.6	92.1	125.8
Belgium/Luxembourg	—	—	—	—	235 Metric Tons £'000	—	—	—	—
Fed. Republic of Germany	99 Metric Tons £'000	—	—	—	124 Metric Tons £'000	—	—	—	—
Netherlands	0.6	—	—	—	0.9	—	—	—	—
Argentina	—	—	—	—	1	10	30	52	—
Canada	—	—	—	—	—	0.1	0.2	0.4	—
El Salvador	—	—	—	—	—	—	—	—	35 Metric Tons £'000
Honduras Republic	—	—	—	—	—	—	—	—	2.9
Martinique	—	—	—	—	—	—	—	—	—
Paraguay	—	—	—	—	—	—	—	—	—
United States	19 551 Metric Tons £'000	25 320 Metric Tons £'000	31 517 Metric Tons £'000	20 506 Metric Tons £'000	19 116 Metric Tons £'000	14 868 Metric Tons £'000	10 490 Metric Tons £'000	8 654 Metric Tons £'000	11 636 Metric Tons £'000
Other countries	167.8	281.8	368.0	261.5	239.3	186.6	108.4	91.7	122.9
	—	—	1	1	—	—	—	—	—
	—	—	—	—	—	—	—	—	—

— Nil or negligible

Source:— Comercio Exterior Direccion General de Estadistica

Appendix B: Table 3
Fresh Pineapples: Exports from the Ivory Coast

		1961	1962	1963	1964	1965	1966	1967	1968
TOTAL	Metric Tons	2 100	2 380	2 880	4 210	4 591	6 839	9 987	13 736
of which to:—	£'000	130.7	148.4	188.0	286.5	299.7	440.3	643.1	1 031.9
Belgium/Luxembourg	Metric Tons	—	—	—	—	—	17	16	9
	£'000	—	—	—	—	—	1.0	1.1	0.6
Denmark	Metric Tons	—	1	—	1	—	—	—	—
	£'000	—	0.2	—	0.3	—	—	—	—
France	Metric Tons	2 075	2 335	2 470	3 931	3 831	6 084	8 700	11 953
	£'000	129.4	144.3	155.1	255.5	247.1	392.7	558.8	896.1
Fed. Republic of Germany	Metric Tons	12	15	—	—	—	—	—	129
	£'000	0.5	1.6	—	—	—	—	—	10.1
Italy	Metric Tons	4	17	—	248	198	581	833	1 037
	£'000	0.4	1.5	—	30.2	17.5	38.1	55.8	78.8
Netherlands	Metric Tons	—	—	—	—	—	—	10	29
	£'000	—	—	—	—	—	—	0.9	2.1
Norway	Metric Tons	—	1	—	—	—	—	—	—
	£'000	—	0.1	—	—	—	—	—	—
Spain	Metric Tons	—	—	—	—	—	—	1	—
	£'000	—	—	—	—	—	—	—	—
Sweden	Metric Tons	—	1	—	1	—	—	—	—
	£'000	—	0.2	—	0.1	—	—	—	11
Switzerland	Metric Tons	6	8	—	4	4	2	26	15
	£'000	0.2	0.3	—	0.4	0.3	0.2	0.9	0.8
United Kingdom	Metric Tons	—	—	—	—	—	—	8	1
	£'000	—	—	—	—	—	—	0.3	—
German Democratic Republic	Metric Tons	—	—	—	—	—	—	7	—
	£'000	—	—	—	—	—	—	0.2	—
Lebanon	Metric Tons	—	—	—	—	—	3	6	9
	£'000	—	—	—	—	—	0.3	0.2	0.6
Algeria	Metric Tons	1	1	—	—	439	41	—	1
	£'000	0.1	0.1	—	—	29.0	2.7	—	—
Libya	Metric Tons	—	—	—	—	—	—	2	—
	£'000	—	—	—	—	—	—	0.1	—
Morocco	Metric Tons	2	—	—	—	—	—	—	—
	£'000	0.1	—	—	—	—	—	—	—
Senegal	Metric Tons	—	—	—	—	—	110	370	534
	£'000	—	—	—	—	—	5.1	24.3	40.5
Upper Volta	Metric Tons	—	—	—	—	—	—	8	—
	£'000	—	—	—	—	—	—	0.3	—
Other countries	Metric Tons	—	1	410	25	119	1	—	—
	£'000	—	0.1	32.9(a)	—	5.8	0.2	0.2	0.3

... Information not available

— Nil or negligible

(a) Mostly exports to Italy

Source:— *Statistiques du Commerce Extérieur* Ministère des Finances des Affaires Economiques et du Plan

Appendix B: Table 4
Fresh Pineapples: Exports from Cuba

		1961	1962	1963	1964	1965
TOTAL	Metric Tons £'000	14 789 407.5	4 126 89.4	1 464 36.1	4 728 476.2	688 3.8
of which to:—						
Fed. Republic of Germany	Metric Tons £'000	183 6.2	681 23.0	279 9.5	2 567 302.5	— —
Netherlands	Metric Tons £'000	—	—	—	189 11.1	— —
Spain	Metric Tons £'000	—	6 0.2	—	110 12.2	— —
Bulgaria	Metric Tons £'000	—	—	—	167 23.1	— —
Czechoslovakia	Metric Tons £'000	496 17.0	1 036 35.0	464 12.2	625 73.2	— —
German Democratic Republic	Metric Tons £'000	788 26.7	—	—	—	—
Poland	Metric Tons £'000	30 1.0	568 19.2	145 4.8	63 2.1	— —
USSR	Metric Tons £'000	267 8.1	—	—	—	—
Canada	Metric Tons £'000	1 681 54.9	1 835 11.9	—	1 006 52.0	— —
Bermuda	Metric Tons £'000	—	—	530 8.0	—	688 3.8
United States	Metric Tons £'000	11 334 292.2	—	—	—	—
Other countries	Metric Tons £'000	10 1.4	— 0.1	46 1.6	1 —	— —

— Nil or negligible

Source:— *Comercio Exterior Ministerio de Hacienda*

Appendix B: Table 5
Fresh Pineapples: Exports from the Republic of South Africa

		1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL	Metric Tons £'000	2 844 138	2 776 150	2 201 133	2 021 130	1 659 108	1 599 116	3 396 225	4 989 362	4 464 313	6 475 455
of which to:—											
Belgium/Luxembourg	Metric Tons £'000	85 3	74 3	— —	— —	— —	— —	— —	— —	— —	— —
Fed. Republic of Germany	Metric Tons £'000	— —	40 3	— —	— —	— —	— —	— —	— —	— —	— —
Netherlands	Metric Tons £'000	— —	4 —	— —	— —	— —	— —	— —	— —	— —	— —
Sweden	Metric Tons £'000	25 1	— —	— —	— —	— —	— —	— —	— —	— —	— —
United Kingdom	Metric Tons £'000	2 517 125	2 449 136	1 956 121	1 886 122	1 602 105	1 593 115	3 383 223	4 911 356	4 423 308	
Congo Leopoldville	Metric Tons £'000	— —	28 1	— —	— —	— —	— —	— —	— —	— —	— —
Rhodesia & Malawi	Metric Tons £'000	173 7	158 6	154 6							
Other countries	Metric Tons £'000	44 2	23 1	91 6	155 8	57 3	6 1	13 2	78 6	41 5	6 475 455(a)

— Nil or negligible

(a) Mostly United Kingdom

... Information not separately shown

Source:— Foreign Trade Statistics Department of Customs & Excise

Appendix B: Table 6
Fresh Pineapples: Exports from Azores

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
TOTAL	Metric Tons £'000	1 379.9 133.0	1 383.0 144.6	1 444.7 171.7	1 377.9 137.2	1 485.2 158.6	1 239.2 133.8	1 376.2 143.3	1 241.2 154.9	1 023.4 130.1	952.5 124.5
of which to:—											
Austria	Metric Tons £'000	2.1 0.3	2.7 0.4	2.0 0.3	— —	0.7 —	— —	— —	— —	— —	— —
Belgium/Luxembourg	Metric Tons £'000	42.9 6.4	34.4 5.8	41.4 6.3	69.4 7.3	95.5 11.2	98.9 12.2	73.4 8.8	83.0 11.6	76.2 10.1	51.0 7.9
Denmark	Metric Tons £'000	— —	1.3 0.2	4.8 0.8	18.1 2.3	10.7 1.2	9.0 1.0	9.0 0.9	13.2 1.6	2.0 0.2	4.0 0.5
Finland	Metric Tons £'000	— —	— —	5.1 0.7	7.6 1.0	11.4 1.4	10.5 1.3	6.7 0.9	— —	— —	— —
France	Metric Tons £'000	231.4 37.1	227.6 39.5	231.0 38.7	233.9 28.1	267.9 31.2	240.0 25.9	253.6 27.6	221.5 28.6	233.0 29.8	206.9 26.8
Fed. Republic of Germany	Metric Tons £'000	467.4 31.0	495.2 41.7	469.8 45.3	381.7 32.3	395.7 39.1	273.7 29.7	369.9 41.4	384.2 51.6	279.9 37.1	272.4 36.8
Gibraltar	Metric Tons £'000	— —	— —	— —	— —	— —	— —	0.9 0.2	— —	— —	0.4 0.1
Italy	Metric Tons £'000	92.3 13.0	130.5 19.3	87.3 15.0	115.3 13.7	158.8 21.2	90.8 12.8	107.1 10.4	94.2 10.9	87.5 9.1	40.6 2.6
Irish Republic	Metric Tons £'000	0.9 0.1	1.3 0.1	1.7 0.1	1.0 —	1.9 0.2	3.1 0.2	0.3 —	1.2 0.1	4.4 0.4	11.3 1.8
Netherlands	Metric Tons £'000	1.5 0.2	— —	— —	18.1 1.9	34.2 3.9	61.0 7.3	55.5 5.0	14.2 2.1	— —	10.6 1.3
Norway	Metric Tons £'000	— —	— —	6.0 0.9	11.4 1.3	11.7 1.3	10.2 1.0	13.3 1.4	17.2 2.3	20.0 2.3	25.4 3.6
Spain	Metric Tons £'000	128.1 18.0	54.0 7.7	89.9 12.8	66.0 7.1	60.5 6.8	90.9 9.8	85.7 10.3	94.9 11.1	116.9 17.5	120.5 18.7
Sweden	Metric Tons £'000	35.9 5.7	51.6 7.8	58.9 9.1	62.2 8.0	70.6 9.2	52.2 6.2	53.6 6.2	62.4 8.5	39.8 6.0	31.6 4.2
Switzerland	Metric Tons £'000	65.2 8.7	69.9 9.7	102.5 15.2	137.2 15.3	113.8 13.1	111.5 12.9	106.2 11.6	74.7 10.5	38.3 5.6	35.9 5.4
United Kingdom	Metric Tons £'000	307.4 11.8	310.6 11.8	340.7 26.2	252.9 18.8	246.6 18.2	186.1 13.2	239.0 18.2	175.9 15.3	122.6 10.9	139.6 14.1
Canada	Metric Tons £'000	— —	— —	— —	— —	— —	— —	— —	— —	— —	0.9 0.1
United States	Metric Tons £'000	— —	— —	— —	— —	0.9 0.1	0.1 —	— —	2.4 0.3	— —	— —
Other countries	Metric Tons £'000	4.8 0.7	3.9 0.6	3.6 0.3	3.1 0.1	4.3 0.5	1.2 0.3	2.2 0.4	0.3 0.4	2.8 0.9	1.4 0.6

— Nil or negligible

Source:— Comercio Externo Instituto Nacional de Estadística

Appendix B: Table 7
Fresh Pineapples: Imports into the USA

		1961	1962	1963	1964
TOTAL	Metric Tons '000 \$	24 390 850	24 123 790	24 959 934	19 141 766
of which from:—					
Argentina	Metric Tons '000 \$	—	—	—	193 10
Bahamas	Metric Tons '000 \$	—	—	—	840 54
Brazil	Metric Tons '000 \$	—	270 15	2	—
British Honduras	Metric Tons '000 \$	—	5	—	—
Columbia	Metric Tons '000 \$	—	12 2	—	75 4
Costa Rica	Metric Tons '000 \$	—	—	5	—
Cuba	Metric Tons '000 \$	5 396 302	—	—	—
Dominican Republic	Metric Tons '000 \$	432 23	238 19	32 1	152 6
Ecuador	Metric Tons '000 \$	351 7	—	155 5	—
French W. Indies	Metric Tons '000 \$	—	—	—	20 2
Guatemala	Metric Tons '000 \$	65 2	86 6	12	2
Haiti	Metric Tons '000 \$	22 1	134 3	55 6	27 1
Honduras	Metric Tons '000 \$	186 16	647 37	243 14	65 6
Mexico	Metric Tons '000 \$	17 920 497	22 726 707	24 378 905	17 752 682
Nicaragua	Metric Tons '000 \$	—	—	18	—
Venezuela	Metric Tons '000 \$	18 2	5 1	59 2	15 1

— Nil or Negligible

Source:—Bureau of the Census Report FT 110 Department of Commerce

Appendix B: Table 8
Fresh Pineapples: Imports into Argentina

	1961	1962	1963	1964	1965	1966	1967	1968	1969
TOTAL	Metric Tons '000 US \$	14 301 864	11 742 630	18 197 1 738	24 842 2 847	23 578 2 588	15 970 1 524	22 640 1 969	26 871 2 906
of which from:—									
Bolivia	Metric Tons '000 US \$	— —	1 —	18 2	117 5	113 9	— —	— —	176 14
Brazil	Metric Tons '000 US \$	19 926 1 263	13 891 838	15 701 1 471	23 804 2 757	22 400 2 460	15 550 1 487	21 680 1 876	25 987 2 807
Ecuador	Metric Tons '000 US \$	— —	— —	229 40	— —	— —	— —	— —	6 1
Mexico	Metric Tons '000 US \$	— —	— —	— —	— —	128 19	— —	— —	31 7
Paraguay	Metric Tons '000 US \$	1 295 87	410 26	2 249 225	921 85	937 100	420 37	960 93	671 77

— Nil or Negligible

Source:—Comercio Exterior Direccion Nacional de Estadistica y Censos

Appendix B: Table 9
Fresh Pineapples: Imports into Japan

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
TOTAL											
of which from:—											
Malaysia	Metric Tons '000 Yen	686 55 457	924 78 157	2 495 176 796	5 521 428 876	11 172 805 111	21 191 1 270 345	21 004 1 193 211	21 382 1 201 840	23 648 1 309 124	35 609 1 986 282
Philippines	Metric Tons '000 Yen	233 8 110	266 11 874	369(a) 10 810	103(a) 3 449	— —	— —	— —	— —	— —	— —
Ryukyu Islands	Metric Tons '000 Yen	— —	— —	10 423	64 4 028	857 55 975	544 37 453	558 36 924	2 650 169 610	2 604 191 398	— —
Singapore	Metric Tons '000 Yen	121 8 856	153 11 319	1 051 69 136	2 544 171 418	1 749 117 114	879 54 081	692 43 943	616 41 229	244 16 863	— —
Taiwan (Formosa)	Metric Tons '000 Yen	— —	— —	3 97	89 2 897	— —	— —	— —	— —	— —	— —
Thailand	Metric Tons '000 Yen	— —	— —	26 2 123	91 6 695	16 856 949 801	18 461 1 012 512	19 277 1 048 755	20 115 1 072 379	32 541 1 752 406	— —
United States	Metric Tons '000 Yen	332 38 460	491 53 847	1 024 93 130	2 694 244 417	1 609 140 432	1 038 83 790	855 72 218	267 25 906	220 25 615	— —

(a) Malaya — Nil or Negligible
Source:—Trade of Japan, Japan Tariff Association

Appendix B: Table 10
Fresh Pineapples: Imports into Canada

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL										
Metric Tons	3 871	3 221	1 814	2 543	2 822	2 538	2 519	2 254	2 991	3 292
'000 \$	441	289	238	361	382	374	419	370	487	543
Of which from:—										
Bahamas	—	—	—	143	49	64	21	—	—	—
	—	—	—	22	6	9	1	—	—	—
Brazil	—	18	—	—	—	—	—	—	—	—
Metric Tons	—	2	—	—	—	—	—	—	—	—
'000 \$	—	—	—	—	—	—	—	—	—	—
Costa Rica	—	—	—	—	—	—	5	118	89	1
	—	—	—	—	—	—	1	21	16	—
Cuba	2 849	2 033	600	702	717	172	10	36	282	334
Metric Tons	284	107	43	60	55	12	1	2	23	34
'000 \$	—	—	—	—	—	—	—	—	7	—
Dominican Republic	—	—	—	—	—	—	—	—	1	—
Metric Tons	—	—	—	—	—	—	—	—	—	—
'000 \$	—	—	—	—	—	—	—	—	164	297
Honduras Republic	—	—	—	—	—	—	—	32	35	59
Metric Tons	—	—	—	—	—	—	—	6	—	—
'000 \$	—	—	—	—	—	—	—	—	—	—
Mexico	165	313	222	180	98	13	35	139	128	194
Metric Tons	21	37	28	22	12	2	5	22	18	32
'000 \$	—	—	—	—	—	—	—	—	7	—
Panama	—	—	—	—	—	—	—	2	2	—
Metric Tons	—	—	—	—	—	—	—	—	—	—
'000 \$	—	—	—	—	—	—	—	—	—	—
Puerto Rico	430	486	554	478	904	1 295	1 236	1 184	1 380	1 247
Metric Tons	67	83	96	81	134	176	170	180	210	179
'000 \$	—	—	—	—	—	—	—	—	—	—
United States	427	371	438	1 040	1 054	994	1 212	743	934	1 218
Metric Tons	69	60	71	176	175	177	241	139	182	239
'000 \$	—	—	—	—	—	—	—	—	—	1
Venezuela	—	—	—	—	—	—	—	—	—	—
Metric Tons	—	—	—	—	—	—	—	—	—	—
'000 \$	—	—	—	—	—	—	—	—	—	—

— Nil or negligible

Source:—Trade of Canada Dominion Bureau of Statistics

Appendix B: Table 11
Fresh Pineapples: Imports into the United Kingdom

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL										
Metric Tons	3 215	2 909	2 957	2 959	2 693	2 750	4 437	5 617	5 045	7 326
£'000	330	303	323	330	329	374	608	766	828	972
of which from:—										
Azores										
Metric Tons	480	481	504	410	382	303	344	301	184	202
£'000	72	66	68	53	66	52	53	40	30	52
France										
Metric Tons	—	8	—	1	72	86	114	125	62	64
£'000	—	1	—	—	19	22	25	17	9	12
Kenya										
Metric Tons	77	97	199	273	240	267	215	205	179	291
£'000	13	16	33	43	33	52	43	37	45	71
Republic of South Africa										
Metric Tons	2 537	2 202	2 174	2 150	1 934	2 027	3 598	4 815	4 430	6 501
£'000	235	206	213	219	201	238	470	650	711	812
Dominica etc.										
Metric Tons	—	—	7	7	3	25	74	36	86	50
£'000	—	—	1	1	1	3	9	5	14	7
Jamaica										
Metric Tons	90	112	62	59	44	11	20	91	—	—
£'000	8	14	8	7	6	2	3	14	—	—
Other countries										
Metric Tons	31	9	11	59	18	31	72	80	104	218(a)
£'000	2	—	—	7	3	5	5	8	19	18

— Nil or Negligible (a) Of which 201 tons from Cuba
Source:—*The Trade of the United Kingdom H.M. Customs and Excise*

Appendix B: Table 12a
Fresh Pineapples: Imports into France

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
TOTAL											
of which from:—											
Portugal	Metric Tons '000 Francs	4 182 7 148	4 872 8 001	5 661 8 801	7 460 11 394	8 419 13 879	10 049 16 378	14 497 22 649	14 402 19 171	14 477 20 420	17 385 27 490
Cameroon	Metric Tons '000 Francs	234 628	229 644	226 616	233 627	247 675	274 644	260 610	230 568	231 617	220 628
Guinea	Metric Tons '000 Francs	785 1 094	850 1 241	1 002 1 490	1 069 1 561	1 053 1 523	1 249 1 826	1 093 1 585	947 974	1 040 1 075	834 1 437
Martinique	Metric Tons '000 Francs	402 379	780 869	1 515 1,881	2 033 2 653	2 382 3 197	1 551 2 731	3 956 6 764	4 353 6 103	4 930 6 578	5 153 6 376
Guadeloupe	Metric Tons '000 Francs	76 110	48 81	— —	— —	44 60	89 142	62 114	103 146	49 61	— —
Ivory Coast	Metric Tons '000 Francs	2 160 3 978	2 370 4 115	2 422 4 075	3 651 5 773	4 229 7 498	6 073 9 562	7 881 12 092	7 971 10 401	7 239 10 978	9 845 17 462
Other countries	Metric Tons '000 Francs	11 20	1 2	27 59	37 50	19 39	16 332	7 12	5 8	22 31	4 12

— nil or negligible

Source: *Commerce Extérieur* Direction Générale Des Douanes Et Droits Indirectes

Appendix B: Table 12b
Fresh pineapples: Re-exports from France

Fresh pineapples: Re-exports from France											
		1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL	Metric Tons '000 Francs	93 191	71 162	225 443	529 1 112	998 2 018	1 349 2 760	2 322 4 287	1 356 2 484	1 173 2 327	2 037 3 863
of which to:—											
Belgium/Luxembourg	Metric Tons '000 Francs	— —	— —	24 53	47 107	108 245	120 295	228 422	259 718	273 1 264	292 2 473
Federal Republic of Germany	Metric Tons '000 Francs	58 105	30 76	168 315	243 497	331 677	517 1 026	1 441 2 594	382 718	577 1 264	1 272 2 473
Greece	Metric Tons '000 Francs	— —	— —	— —	— —	— —	— —	— —	— —	— —	39 62
Italy	Metric Tons '000 Francs	— —	— —	— —	62 135	121 230	246 540	123 230	50 88	43 105	121 259
Netherlands	Metric Tons '000 Francs	— —	— —	— —	— —	— —	43 81	191 330	— —	— —	— —
Spain	Metric Tons '000 Francs	— —	— —	— —	106 222	206 374	179 306	— —	— —	160 257	193 308
Sweden	Metric Tons '000 Francs	— —	— —	— —	— —	— —	— —	22 55	— —	— —	— —
Switzerland	Metric Tons '000 Francs	— —	— —	— —	43 90	194 407	160 354	183 390	564 1 084	61 135	74 144
United Kingdom	Metric Tons '000 Francs	— —	— —	— —	— —	37 61	81 154	69 119	51 79	— —	— —
USSR	Metric Tons '000 Francs	— —	— —	— —	— —	— —	— —	10 51	— —	— —	— —
Other countries	Metric Tons '000 Francs	35 85	41 86	33 75	28 61	1 24	3 4	55 96	50 77	59 11	46 88

— nil or negligible

Source: Commerce Extérieur Direction Générale Des Douanes Et Droits Indirectes

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL	Metric Tons '000 DM	3 440 2 884	2 199 2 302	1 995 2 409	2 162 2 853	2 068 2 968	2 985 4 727	4 330 5 845	3 786 5 571	6 486 7 952
of which from:—										
Azores	Metric Tons '000 DM	477 822	487 996	305 644	395 867	278 570	364 769	306 551	321 711	301 541
Taiwan	Metric Tons '000 DM	—	9 40	17 77	5 23	6 23	4 15	19 78	13 50	38 134
Cameroon	Metric Tons '000 DM	—	—	—	9 16	—	—	90 147	148 242	72 82
Guinea	Metric Tons '000 DM	138 203	155 198	150 210	19 31	10 20	145 216	117 146	209 260	349 361
Ivory Coast	Metric Tons '000 DM	9 25	19 32	67 147	90 171	205 388	1 357 2 189	2 328 3 199	1 765 2 640	3 379 4 376
Kenya	Metric Tons '000 DM	—	—	28 127	140 380	192 575	98 287	94 271	208 454	350 684
Republic of South Africa	Metric Tons '000 DM	31 30	—	—	—	—	—	41 49	32 46	52 59
Spanish Guinea	Metric Tons '000 DM	—	—	—	—	—	—	—	14 23	24 32
Brazil	Metric Tons '000 DM	2 795 1 577	1 249 651	1 210 777	1 173 739	604 370	477 378	668 444	97 57	625 398
Costa Rica	Metric Tons '000 DM	—	—	—	—	—	—	—	46 34	269 217
Cuba	Metric Tons '000 DM	—	—	—	—	—	—	22 35	485 414	672 628
Martinique	Metric Tons '000 DM	—	—	193 399	293 564	474 807	398 619	516 699	367 562	235 318
Mexico	Metric Tons '000 DM	82 51	—	—	—	233 120	—	28 63	—	—
USA	Metric Tons '000 DM	—	—	—	—	26 37	23 40	19 46	—	47 38
Other countries	Metric Tons '000 DM	20 32	158 182	25 28	38 62	40 58	119 214	82 117	81 78	73 84

— Nil or Negligible

Source:—*Du Aussenhandel Statistisches Bundesamt*

Appendix B: Table 14
Fresh Pineapples: Imports into the Netherlands

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL										
Metric Tons	115	124	44	102	160	117	288	400	683	2 014
'000 Gldr	61	56	45	84	160	146	307	371	551	1 339
of which from:—										
Belgium/Luxembourg										
Metric Tons	—	10	4	9	15	8	4	15	104	59
'000 Gldr	1	12	5	16	23	19	9	22	112	78
Azores										
Metric Tons	—	—	—	—	9	22	12	5	—	12
'000 Gldr	—	—	—	—	16	46	21	11	—	23
Kenya										
Metric Tons	—	—	—	—	9	—	6	8	—	—
'000 Gldr	—	—	—	—	25	—	12	19	—	—
Brazil										
Metric Tons	101	82	29	62	117	33	84	184	21	479
'000 Gldr	45	27	23	35	72	14	40	79	11	169
France										
Metric Tons	—	—	—	—	—	42	151	157	152	266
'000 Gldr	—	—	—	—	—	45	199	215	159	249
Ivory Coast										
Metric Tons	—	—	—	—	—	—	—	—	9	110
'000 Gldr	—	—	—	—	—	—	—	—	19	128
Cuba										
Metric Tons	—	—	—	—	—	—	—	—	313	847
'000 Gldr	—	—	—	—	—	—	—	—	174	513
Fed Republic of Germany										
Metric Tons	—	—	—	—	—	—	—	—	67	131
'000 Gldr	—	—	—	—	—	—	—	—	60	84
United States										
Metric Tons	—	—	—	—	—	—	—	—	—	42
'000 Gldr	—	—	—	—	—	—	—	—	—	33
Republic of South Africa										
Metric Tons	—	—	—	—	—	—	—	—	—	30
'000 Gldr	—	—	—	—	—	—	—	—	—	35
Other countries										
Metric Tons	13	32	11	31	10	12	31	25	17	38
'000 Gldr	15	17	17	33	24	22	26	25	16	27

— Nil or Negligible

Source:—Maandstatistiek Van De In-Uit-voer Centraal Bureau Voor de Statistiek

Appendix B: Table 15
Fresh Pineapples: Imports into Belgium/Luxembourg

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
TOTAL											
of which from:—											
France	Metric Tons '000 Francs	191 2 745	135 2 580	101 2 108	156 3 620	245 6 254	393 9 595	574 12 216	961 18 087	1 198 22 098	1 862 29 975
Portugal	Metric Tons '000 Francs	— —	10 249	20 485	44 1 008	140 3 283	244 5 685	376 7 518	596 10 719	886 15 733	1 596 25 483
Republic of South Africa	Metric Tons '000 Francs	— —	47 1 288	34 741	59 1 667	89 2 570	95 1 996	66 2 191	78 2 191	75 2 161	— —
Ivory Coast	Metric Tons '000 Francs	— —	59 768	26 457	37 568	— —	— —	— —	78 1 266	— —	— —
Other countries	Metric Tons '000 Francs	— —	— —	— —	— —	— —	— —	— —	138 1 977	97 1 759	— —
	Metric Tons '000 Francs	191 2 745	19 275	21 425	16 377	16 401	54 1 914	132 2 507	71 1 934	140 2 445	266 4 492

— Nil or Negligible

Source:—Commerce Extérieur L'Institut National de Statistique

Appendix B: Table 16
Fresh Pineapples: Imports into Italy

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	
TOTAL											
of which from:—											
France	Metric Tons '000 lira	97 31 929	192 50 889	295 74 938	520 133 450	597 154 236	966 226 375	1 337 291 274	1 561 345 415	1 613 372 653	2 202 627 479
Azores	Metric Tons '000 lire	— —	— —	19 6 131	28 8 262	58 15 050	114 31 726	127 30 838	111 28 358	76 18 976	...
	Metric Tons '000 lira	94 29 394	128 37 136	94 32 933	117 36 131	95 31 843	88 23 268	86 23 221	151 35 425	43 10 194	...
Australia	Metric Tons '000 lire	3 2 535	1 719	2 1 477	1 510	— —	— —	— —	— —	— —	...
Ivory Coast	Metric Tons '000 lira	— —	— —	179 34 357	304 74 325	342 80 466	713 158 943	970 206 484	1 266 275 043	1 343 308 305	1 627 468 852
Guinea	Metric Tons '000 lira	— —	— —	— —	32 6 991	86 22 700	19 5 519	87 17 464	7 1 262	69 12 862	...
Venezuela	Metric Tons '000 lira	— —	— —	— —	35 6 490	1 239	— —	— —	— —	— —	...
Martinique	Metric Tons '000 lira	— —	— —	— —	— —	8 198	14 3 561	45 9 101	9 2 404	8 1 963	...
Fed Republic of Germany	Metric Tons '000 lira	— —	— —	— —	— —	— —	— —	— —	— —	15 6 757	...
Spain	Metric Tons '000 lira	— —	— —	— —	— —	— —	— —	— —	— —	34 9 046	...
Taiwan	Metric Tons '000 lira	— —	— —	— —	— —	— —	— —	— —	1 655	2 1 012	...
Indonesia	Metric Tons '000 lira	— —	— —	— —	— —	— —	— —	— —	14 2 240	23 3 538	...
Other countries	Metric Tons '000 lira	— —	63 13 034	1 40	3 741	7 3 790	18 3 358	22 4 144	1 28	— —	575 158 627

— Nil or Negligible ... Information not available

Source:—Comercio Con L'Estero Instituto Centrale di Statistica

Appendix B: Table 17
Fresh Pineapples: Imports into Sweden

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
TOTAL	74 211	74 211	64 214	70 226	83 285	105 398	188 552	245 552	359 984	698 1 461
of which from:—										
Azores	54 169	55 179	61 209	67 215	73 260	64 214	75 247	78 201	45 166	41 126
Kenya	—	—	—	—	6 12	32 143	30 124	36 115	59 209	48 176
Ivory Coast	—	—	—	—	—	—	31 81	27 77	177 464	144 382
Republic of South Africa	—	—	—	—	—	—	3 7	5 10	—	14 23
Ecuador	—	—	—	—	—	—	38 58	72 74	5 10	11 22
USA	—	—	—	—	—	6 31	—	21 49	—	65 99
Brazil	14 27	—	—	—	—	—	—	—	—	93 74
Martinique	—	—	—	—	—	—	—	—	8 25	89 254
Cuba	—	—	—	—	—	—	—	—	—	90 142
Costa Rica	—	—	—	—	—	—	—	—	8 16	25 38
Puerto Rico	—	—	—	—	—	—	—	—	44 61	60 106
Other countries	6 15	19 32	3 5	3 11	4 13	3 10	11 35	6 26	13 33	18 19

— Nil or negligible

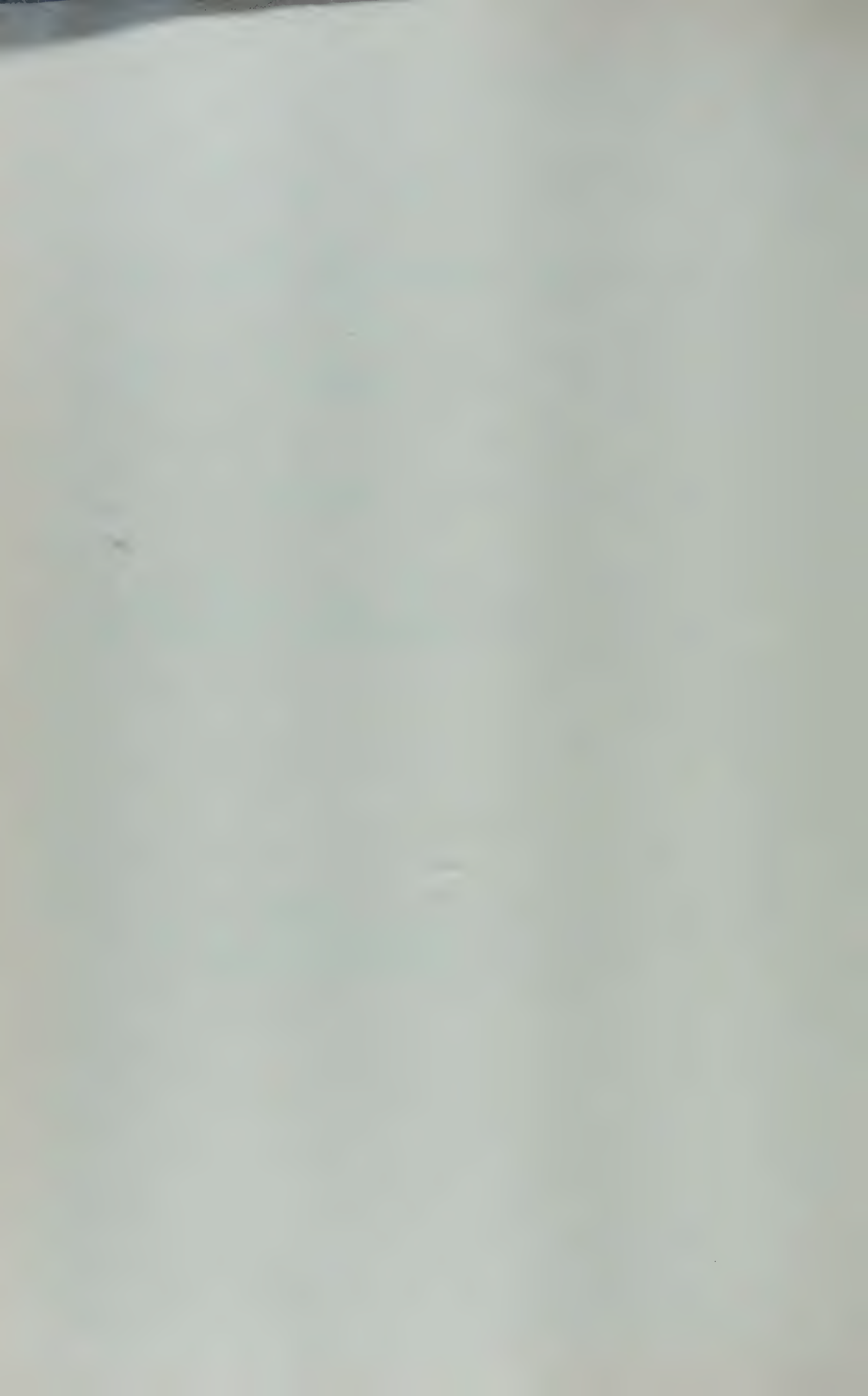
Source: —Sveriges Inforsel Och Utforsel Statistiska Centralbyran

Appendix B: Table 18
Fresh Pineapples: Imports into Switzerland

		1968	1969	1970
TOTAL		1 253	1 010	1 447
of which from:—		2 277	2 012	2 459
Italy	Metric Tons '000 Francs	11 25	12 26	10 21
Azores	Metric tons '000 Francs	96 163	41 54	78 120
Spain	Metric Tons '000 Francs	16 25	— —	43 62
Taiwan	Metric Tons '000 Francs	13 57	28 128	14 58
Cameroons	Metric Tons '000 Francs	21 38	7 13	17 28
Ghana	Metric Tons '000 Francs	15 18	11 13	31 58
Guinea	Metric Tons '000 Francs	— —	6 14	— —
Ivory Coast	Metric Tons '000 Francs	863 1 475	738 1 339	1 020 1 630
Kenya	Metric Tons '000 Francs	83 257	123 359	134 358
Senegal	Metric Tons '000 Francs	117 180	— —	— —
Republic of South Africa	Metric Tons '000 Francs	— —	— —	8 11
Brazil	Metric Tons '000 Francs	— —	— —	14 11
Costa Rica	Metric Tons '000 Francs	— —	7 11	15 24
Cuba	Metric Tons '000 Francs	— —	34 47	40 47
Other countries	Metric Tons '000 Francs	18 39	3 8	23 31

—Nil or negligible

Source:—Statistique de la Suisse Bureau Federal de Statistique.



Appendix C

ESTIMATES OF PER CAPITA CONSUMPTION IN EIGHT EUROPEAN COUNTRIES

Estimates of *per capita* consumption in eight European countries

Grams

Year	France	United Kingdom	Fed. Rep. of Germany	Italy	Switzerland	Belgium/Luxembourg	Netherlands	Sweden	All eight countries
1961	88.6	60.8	65.8	2.0	22.6	20.1	9.6	9.9	48.3
1962	102.2	54.6	62.8	3.8	26.1	14.2	10.5	9.8	49.3
1963	113.7	55.1	39.6	5.8	34.7	10.5	3.7	8.4	46.6
1964	143.4	54.8	35.6	10.2	46.0	16.0	8.4	9.2	53.1
1965	152.2	49.4	38.0	11.6	69.1	25.0	13.0	10.8	55.6
1966	176.9	50.2	36.0	18.6	76.8	39.8	9.4	13.4	62.4
1967	245.7	80.6	51.8	25.6	98.8	57.9	22.8	23.9	89.9
1968	261.4	101.6	72.2	29.6	199.3	96.6	29.6	31.0	107.8
1969	264.4	90.8	62.6	30.4	162.1	120.0	27.8	45.0	104.3
1970	302.2	131.5	105.4	41.0	230.4	185.8	63.6	86.8	140.0

Sources.—Consumption *per capita* estimated from:—

Imports—Exports (*in kg*)

Population (*in thousands*)

Imports and exports from officially published trade statistics.

Mid-year population figures from *Demographic Year Book, United Nations*

